



# Pugwash

N E W S L E T T E R

*issued by the Council of the Pugwash  
Conferences on Science and World Affairs  
Nobel Peace Prize 1995*



50  
YEARS

*Pugwash 50th Anniversary,  
Thinker's Lodge, Pugwash, Nova Scotia, July 2007*

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# Pugwash

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## To the Pugwash Community

### Fifty Years of the Pugwash Conferences

Celebrations in honor of the 50th anniversary of the Pugwash Conferences on Science and World Affairs are occurring around the world in 2007. National groups from Denmark to Russia, Sri Lanka to the United States, and Spain to Japan, are organizing events to commemorate the very first meeting, held in July 1957 at the home of Cyrus Eaton in Pugwash, Nova Scotia, and to remind the world of the ever-present threat posed by nuclear weapons.

The highlight of the 50th anniversary celebrations took place in early July 2007 when some two dozen international experts on nuclear weapons issues convened in Pugwash for the workshop on *Revitalizing Nuclear Disarmament*, co-sponsored by the Pugwash Conferences and the Middle Powers Initiative. During their two-day meeting, workshop participants discussed ways of accelerating progress on both nuclear disarmament and nuclear non-proliferation, as summarized in the special communiqué released at the end of the meeting (see page 3).

In addition to the workshop, the Pugwash Peace Exchange, the Canadian Pugwash Group, and the Pugwash Parks Commission hosted a number of public events that featured such speakers as Pugwash President, Prof. M.S. Swaminathan, Hiroshima Mayor Tadatoshi Akiba, Canadian Foreign Minister Peter MacKay, Nova Scotia Premier Rodney MacDonald, Canadian Senator and retired Gen. Roméo Dallaire, former UN Under Secretary for Disarmament, Jayantha Dhanapala, and former New Zealand Minister of Disarmament and Arms Control, Marian Hobbs.

The Pugwash 50th Anniversary Communiqué, released to governments and media around the world, symbolizes the credo of Pugwash that was first enunciated in the 1955 Russell-Einstein Manifesto, the catalyst that led to the first Pugwash meeting in July 1957:

*As long as nuclear weapons exist, they will one day be used.*

*This sober, inescapable truth continues to haunt the international community. Every minute of every day, more than 26,000 nuclear weapons—many thousands*

*of them on hair-trigger alert—are poised to bring monumental destruction if they are ever used. Nuclear weapons have spread to more countries, and the international non-proliferation regime is perilously close to collapse. Poorly guarded stockpiles of highly enriched uranium and plutonium around the world could fall into the hands of terrorists who would think nothing of exploding a nuclear device in a major city.*

*Momentum is growing in the international community, however, from many different political quarters, to re-energize the campaign to declare nuclear weapons illegal and immoral, and to reduce and eliminate them. But the time is now for decisive leadership and action to mount a global political campaign to eliminate these weapons of mass destruction, before it is too late.*

*Great changes in history—the end of slavery, the fall of the Berlin Wall and the end of the Cold War—have come about through concerted political action, often suddenly and with little warning. The international community has the opportunity to achieve yet another epochal event: ending the reliance on nuclear weapons and the total elimination of these genocidal weapons.*

*We ask all governments, nuclear and non-nuclear alike, a simple question. What are you doing to fulfill the basic obligation of every government—the ‘responsibility to protect’ the lives and human rights of its citizens that would be obliterated by nuclear devastation?*

As Pugwash moves forward, all of us in the Pugwash community need to redouble our efforts to ensure that these horrific weapons of mass destruction are never used, and are eliminated entirely as soon as possible.

### 57th Pugwash Conference on Science and World Affairs

In October 2007, Pugwash will continue its commemoration of its 50th anniversary with the 57th Pugwash Conference, *Prospects for Disarmament, Dialogue and Cooperation in the Mediterranean Region*, taking place in

Bari, Italy. The 57th Pugwash Conference will inaugurate the 11th Quinquennium of Pugwash, from 2007 to 2012, with new members of the Pugwash Council and a new President of Pugwash taking office.

Appropriately, the entire Pugwash community takes this opportunity to express its deep gratitude to Prof. M.S. Swaminathan of India for his service these past five years as the President of Pugwash. Following in a tradition of previous Presidents such as Dorothy Hodgkin and Michael Atiyah, Prof. Swaminathan helped bring the mission of Pugwash to the attention of policymakers, scientists, and the public around the world, on issues including not only nuclear weapons, but other globally challenging issues such as food security and climate change. We are indebted for his service to Pugwash.

Pugwash also thanks those members of Council whose service will end this year, including Fernando de Souza Barros (Brazil), Pierre Canonne (France), Chen Jifeng (China), Hitoshi Ohnishi (Japan), and Douglas Roche (Canada).

Finally, we also express our profound sadness at the death of Anne McLaren, who died in an automobile accident in July 2007. In many ways, Anne was the conscience of the Pugwash Council these past five years, always asking probing questions and raising difficult issues concerning the role of science in public policy. She always did so with a fundamental belief in the goodness of humanity and the need for the scientific community to follow the credo of the Russell-Einstein Manifesto - that scientists do all in their power to ensure the beneficial applications of their work.

### **Acknowledgments**

For continued support of the *Pugwash Newsletter* and the Pugwash Conferences, we are grateful to the German Research Society, the Russian Academy of Sciences, the John D. and Catherine T. MacArthur Foundation, the Carnegie Corporation of New York, and the Ploughshares Fund.

Jeffrey Boutwell, Editor



**Reception at Fox Harb'r Resort, Jayantha Dhanapala, Paolo Cotta-Ramusino, Tadatoshi Akiba, M.S. Swaminathan, Douglas Roche, host Ron Joyce, Roméo Dallaire.**



## ***Revitalizing Nuclear Disarmament: Policy Recommendations of the Pugwash 50th Anniversary Workshop***

*Co-Sponsored by the Pugwash Conferences on Science and World Affairs  
and the Middle Powers Initiative*

Pugwash, Nova Scotia, 5–7 July 2007

**A**s long as nuclear weapons exist, they will one day be used. This sober, inescapable truth continues to haunt the international community. Every minute of every day, more than 26,000 nuclear weapons—many thousands of them on hair-trigger alert—are poised to bring monumental destruction if they are ever used. Nuclear weapons have spread to more countries, and the international non-proliferation regime is perilously close to collapse. Poorly guarded stockpiles of highly enriched uranium and plutonium around the world could fall into the hands of terrorists who would think nothing of exploding a nuclear device in a major city.

Momentum is growing in the international community, however, from many different political quarters, to re-energize the campaign to declare nuclear weapons illegal and immoral, and to reduce and eliminate them. But the time is now for decisive leadership and action to mount a global political campaign to eliminate these weapons of mass destruction, before it is too late.

Great changes in history—the end of slavery, the fall of the Berlin Wall and the end of the Cold War—have come about through concerted political action, often suddenly and with little warning. The international community has the opportunity to achieve yet another epochal event: ending the reliance on nuclear weapons and the total elimination of these genocidal weapons.

We ask all governments, nuclear and non-nuclear alike, a simple question. What are you doing to fulfill the basic obligation of every government—the ‘responsibility to protect’ the lives and human rights of its citizens that would be obliterated by nuclear devastation?

Given political leadership and political will, implementation of the following steps could greatly reduce the risk of nuclear weapons use:

- Immediate de-alerting of the thousands of nuclear weapons, on quick reaction alert, that could be launched by accident, miscalculation, or unauthorized computer hacking of command and control systems;
- Official declarations by all nuclear weapons-states of a No First Use policy, and adoption of Negative Security Assurances that nuclear weapons will never be used against countries who have legally bound themselves not to acquire nuclear weapons;
- Immediate resumption of US-Russian nuclear negotiations to reduce their nuclear forces to 1,000 or fewer nuclear weapons; to accelerate the dismantlement and destruction of all excess nuclear forces and fissile material; and to jointly develop early warning systems to reduce the risk of accidental or unauthorized launch of nuclear weapons.
- Political agreement by NATO to withdraw all US nuclear weapons from Europe, and to conclude a global agreement that nuclear weapons of any country not be deployed on foreign territory;
- Full funding and implementation of the International Monitoring System of the Comprehensive Test Ban Treaty to ensure the continued moratorium on nuclear testing, prior to the entry into force of the CTBT;
- An early start to negotiations of a global Fissile Material Cut-off Treaty and a complete prohibition on the deployment and use of space weapons;



- Finally, all States should affirm the goal of the complete abolition and elimination of nuclear weapons through a multilaterally-verified instrument—a Nuclear Weapons Convention—and work towards making such a convention a reality.

We hope that the Government of Canada especially will play an active role in the achievement of these objectives.

The goal of all these initiatives should be the strengthening of an equitable non-proliferation regime that emphasizes the obligations of non-nuclear states not to acquire nuclear weapons, and of nuclear weapons-states to reduce and eliminate their nuclear arsenals as soon as practicable.

Only by concerted political will and public pressure can we avoid the inevitable catastrophe that will surely come if nuclear weapons continue to exist.

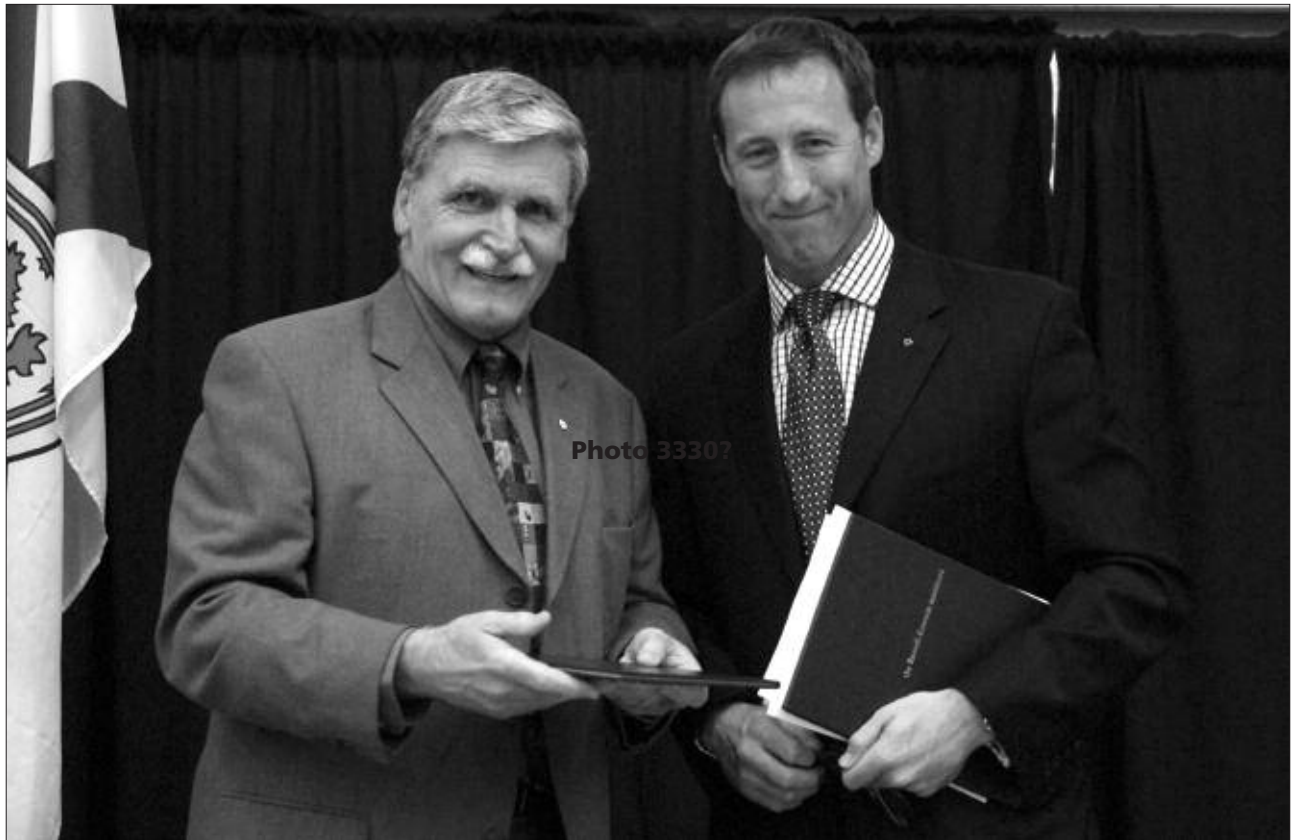
*From 5–7 July 2007, a distinguished group of 25 international scientists and specialists on nuclear weapons issues met in the fishing village of Pugwash, Nova Scotia—on the 50th anniversary of the first Pugwash Conference—*

*to discuss the urgency of revitalizing nuclear disarmament in order to free the world from the ever-present threat posed by nuclear weapons. Co-sponsored by the Pugwash Conferences on Science and World Affairs, which received the 1995 Nobel Peace Prize with its co-founder and then President, Sir Joseph Rotblat, and the Middle Powers Initiative, the full list of workshop recommendations and analysis will be available shortly in the forthcoming workshop report.*

*For more information, contact:*

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**Sen. Roméo Dallaire presents a commemorative edition of the Russell-Einstein Manifesto to Canadian Foreign Minister Peter MacKay.**





PRIME MINISTER · PREMIER MINISTRE

I am pleased to extend my warmest greetings to everyone participating in the Pugwash 2007 Extraordinary Workshop, Revitalizing Nuclear Disarmament, on the occasion of the 50th anniversary of the first Pugwash Conference on Science and World Affairs.

It was a progressive notion in 1957, to create a forum where scientists and influential public figures could meet as individuals in their private capacity to discuss the threat posed to civilization by nuclear weapons. Since then, insights from Pugwash discussions have informed many international agreements on nuclear and other weapons of mass destruction. For their efforts to diminish the part played by nuclear arms in international politics, and in the longer run, to eliminate such arms, Pugwash and its co-founder, Sir Joseph Rotblat, were awarded the Nobel Peace Prize in 1995.

The mission and objectives of the Pugwash Council are as relevant today as ever. Although there have been many positive developments over the years, there is still much work to be done. The 50th anniversary workshop offers delegates an opportunity to bring scientific insight and reason to bear on recent international conflicts that challenge world peace and security.

I would like to commend everyone associated with the Pugwash Conferences for seeking solutions to global problems with intelligence and perseverance.

On behalf of the Government of Canada, please accept my best wishes for an enjoyable and productive conference.

OTTAWA, 2007





*Message from the Honourable Rodney J. MacDonald, MLA  
Premier of the Province of Nova Scotia*

How fitting, half a century following the first meeting of 22 world-renowned scientists from across the globe, that another meeting should take place whose goal is, of course, to foster peace. On behalf of a grateful province, I welcome all participants to our beautiful and tranquil corner of our planet.

A Saudi astronaut, the first Muslim to travel in space, offered great insight through his comments following the completion of his mission as part of an international member flight. He said: “The first day or so we all pointed to our countries. The third or fourth day we were pointing to our continents. By the fifth day, we were aware of only one Earth.”

We must all remember that there is only one Earth. In this spirit, may the seeds of hope sown at the 2007 Pugwash Peace Exchange engender what this world needs above all else: peaceful global co-existence. May the memory of those who have made their mark in promoting peace here in Pugwash in years past—great individuals like Joseph Rotblat—inspire you as you continue this vital work half a century later.

Sincerely,

A handwritten signature in cursive script that reads "Rodney MacDonald".

Rodney MacDonald  
Premier of Nova Scotia





# *Revitalizing Nuclear Disarmament:* Policy Recommendations of the Pugwash 50th Anniversary Workshop



## PROGRAM

<b>Thursday, July 5</b>	Participants arrive at Halifax airport during the day; transported to Pugwash	<b>Saturday, July 7</b>	Breakfast
5:30 PM	Reception/Dinner	7:30 AM	
7:30 PM	<b>Public Lecture in Public School</b> <i>From Cyrus Eaton to Joseph Rotblat: Creating the Path to a Nuclear Weapons-Free World</i> <b>Chairs:</b> Douglas Roche and Paolo Cotta-Ramusino <b>Speakers/Dialogue:</b> Sen. Roméo Dallaire, Jayantha Dhanapala, and Marian Hobbs	9 AM–10:30 AM	<b>Plenary III—How Non-nuclear Weapons States Can Advance Nuclear Disarmament</b> <b>Chair:</b> Jonathan Granoff <i>Speakers:</i> Marian Hobbs, Miguel Marin-Bosch, Mohamed Shaker
<b>Friday, July 6</b>		10:30–11 AM	Coffee
7:30 AM.	Breakfast	11–12:30 PM	<b>Plenary IV—Nuclear weapons and the Exacerbation of Conflicts: The Case of the Middle East</b> <b>Chair:</b> Paolo Cotta-Ramusino
9 AM–12 PM	<b>Plenary I—Disarmament: What the Nuclear Weapons States Should Do</b> <b>Chair:</b> Jeffrey Boutwell	12:30–2 PM:	Lunch
[coffee 10:30]	<ul style="list-style-type: none"> <li>• “Unequivocal Undertaking to Disarm” (2000)</li> <li>• “Good Faith” Negotiations (NPT)</li> <li>• Strategic and Substrategic Nuclear Weapons</li> <li>• Implications of Not Following Through <i>Speakers:</i> Steven Miller, Li Hua, Alexander Nikitin, Ramamurti Rajaraman</li> </ul>	2–3:30 PM:	<b>Plenary V—Towards a Nuclear Weapons Convention: Building Political Will and Support</b> <b>Chair:</b> Douglas Roche. <i>Speakers:</i> Jeffrey Boutwell, Jayantha Dhanapala, Paolo Cotta-Ramusino
12 noon	<b>Lunch</b>	3:30 PM:	<b>Workshop Adjourns</b>
2:30–3:45 PM.	<b>Plenary II—Implementing Legal, Technical and Political Elements Towards a Nuclear Weapons-Free World</b> <b>Chair:</b> Steven Miller	3:30–4:45 PM:	Meeting of Pugwash Council members with Pugwash Peace Exchange and Pugwash Parks Commission
	<ul style="list-style-type: none"> <li>• De-alerting (<i>Bruce Blair</i>)</li> <li>• CTBT, FMCT and verification issues (<i>Ernie Regehr</i>)</li> </ul>	5 PM:	Dedication Ceremony for Pugwash Peace Exchange at Thinker’s Lodge: Premier of Nova Scotia, Sen. Roméo Dallaire, Douglas Roche, Paolo Cotta-Ramusino, Stephen Leahey
3:45–4:15 PM	Coffee	6 PM:	<b>Reception</b>
4:15–5:30 PM	<b>Plenary II (continued)</b>	7 PM.	<b>Public Dinner at Pugwash High School</b> <i>Speakers:</i> Hiroshima Mayor Tadatoshi Akiba and Canadian Foreign Minister Peter MacKay
	<ul style="list-style-type: none"> <li>• Negative Security Assurances (<i>Jonathan Granoff</i>)</li> </ul>	<b>Sunday, July 8</b>	
7 PM	Dinner: Special Event arranged by Pugwash Peace Exchange at Fox Harb’r Resort	7:30 AM.	Breakfast
			Departure of International Participants



# *Revitalizing Nuclear Disarmament:* Policy Recommendations of the Pugwash 50th Anniversary Workshop

## INTRODUCTORY REMARKS

PAOLO COTTA-RAMUSINO  
SECRETARY GENERAL, PUGWASH CONFERENCES

**T**he Pugwash movement that began here in Pugwash, Nova Scotia 50 years ago this month, was inspired by the Russell-Einstein Manifesto, whose youngest signatory was Joseph Rotblat. In the Manifesto there is not only the call for a nuclear weapons-free world, but also the warning that war in the nuclear age has become too dangerous and mankind should, in the words of the Manifesto “renounce war altogether”.

This warning, even more than the call for the elimination of nuclear weapons, can be considered idealistic and utopian and hence just a manifestation of wishful thinking. But the true utopia (literally something that exists nowhere) is not to recognize that war in a nuclear age is in the long run incompatible with our survival.

So the issue of smoothing down antagonisms and promoting conflict-resolution is directly relevant to the issue of nuclear disarmament and to the prevention of nuclear proliferation.

Addressing the issue of conflict resolution has been an integral part of Pugwash since the very beginning. Of course this has been done in the typical Pugwash way: not so much through generic calls for peace but through the definition of concrete steps and with small steps, steps that will be hopefully effective in the long run. As in the title of this evening’s event, the aim of Pugwash aim is to create and define the path to a safer world.

What has changed from the time of the founding members of Pugwash has been the dramatic shift in the antagonism between Russia and the West with the end of the Cold War (but without, however, the elimination of their monstrous arsenals of nuclear weapons). But new powerful antagonisms arose. And we see that once again nuclear weapons are seen both as a currency of power and an instrument used by countries to address security concerns.

Dealing with these new antagonisms, promoting nuclear disarmament and preventing nuclear proliferation in a moment when the frame of reference for conflicts and hostilities has changed dramatically and is still changing, is the task of Pugwash in the post Joseph Rotblat period.

We are here not only to celebrate the 50th anniversary of Pugwash and to praise what happened from Cyrus Eaton to Joseph Rotblat, but to discuss what comes next.

Our fight against weapons of mass destruction should not be confused with the campaign that some nuclear power states are conducting against WMD.

One of the paradoxes of our time is that the devastation of war has been brought about with the motivation of destroying weapons of mass destruction, even when there were no such weapons.

At the same time, nuclear disarmament is stalled and other states that became nuclear have been rewarded with special treatment. We can thus conclude that in the vision of the stronger nuclear states, there are good and bad proliferators, and that even states that are not proliferators can be attacked with the excuse of eliminating WMD.

These are not rational grounds for a universal agreement to eliminate WMD, and in particular nuclear weapons. In fact the campaign against WMD has been devaluated to something that is purely instrumental and partisan.

One of the tasks of Pugwash is to help restore the universal character of the fight against nuclear weapons. “Remember your humanity and forget the rest” is written in the Russell-Einstein Manifesto. On this 50<sup>th</sup> anniversary of Pugwash, what we confront is a changing and more complex “rest” to forget.



## INTRODUCTORY REMARKS

HON. DOUGLAS ROCHE,  
O.C. CHAIRMAN, MIDDLE POWER INITIATIVE

### *From Cyrus Eaton to Joseph Rotblat: Creating the Path to a Nuclear Weapons-Free World*

**T**onight is another historic occasion in Pugwash. Fifty year ago tomorrow, Cyrus Eaton, the self-proclaimed “village boy from Pugwash,” who had become an American industrialist and peace activist, brought to Pugwash 22 scientists from the United States, the Soviet Union and several other countries. Cyrus’s purpose in bringing the group together was to discuss how to contain the burgeoning nuclear arms race in the Cold War.

What a movement he started.

That meeting gave birth to the Pugwash Conferences on Science and World Affairs, an organization with offices in Rome, Washington, Geneva and London, which won the Nobel Peace Prize in 1995 for its work on nuclear disarmament.

The heart of the movement has always been Cyrus Eaton’s home in Pugwash, which became known as the Thinkers’ Lodge, where workshops and seminars have been held over the years. This legacy is now the basis for a new development, the Pugwash Peace Exchange, a new organization, which will construct a building containing interactive displays illustrating the nature of war and peace.

Some time ago, Stephen and Dennice Leahey, two retired executives in Pugwash, came to the Pugwash Park Commission, which owns the Thinkers’ Lodge, with a plan not only to renovate the Lodge but add a new facility to be an interpretive, educational and research centre. This idea was given impetus by Sir Joseph Rotblat in Pugwash in 2002 when he urged that more needed to be done by the Pugwash Conferences to engage civil society; he volunteered to become the Pugwash Peace Exchange’s first Patron to underline this belief. The idea quickly caught on and the Pugwash Peace Exchange attracted Senator Roméo Dallaire, the famous Canadian general as its Honourary Patron along with a distinguished Board of Advisors. With a fund-raising and membership drive under way, the Pugwash Peace Exchange is now ready to move ahead. This 50<sup>th</sup> anniversary celebration of Pugwash gives momentum to the project.

The planners think that the Pugwash past can be turned into a vibrant future with a mission to promote learning about the realities of war and the necessity of peace and nuclear disarmament, all in the context of history, science and personal commitment.

This evening, we open the centerpiece of the 50<sup>th</sup> Anniversary Observance, an Extraordinary Workshop, “Revitalizing Nuclear Disarmament,” comprising 25 scientists, diplomats, and former military officers from 15 countries. The Workshop is co-sponsored by Pugwash Conferences on Science and World Affairs and the Middle Powers Initiative. The Pugwash Peace Exchange, the Pugwash Park Commission and the Canadian Pugwash Group have all been involved. Much work has gone into planning his unique event.

Last summer at the Thinkers’ Lodge, the Middle Powers Initiative convened a meeting of the Steering Committee and joined forces with Pugwash to produce this important Workshop. The Workshop’s goal is to produce an Action Plan, building on the Article VI Forum of the Middle Powers Initiative, to start negotiations on nuclear disarmament steps, which could lead to the conclusion of a Nuclear Weapons Convention or a frame-



*M.S. Swaminathan and Roméo Dallaire.*





*Canadian MP Bill Casey, Foreign Minister Peter MacKay, MP Alexis McDonough, Sen. Roméo Dallaire*

work of instruments for the abolition of nuclear weapons. The Workshop's Action Plan will be sent to every government in the world. Thus the Workshop will give new impetus to Cyrus Eaton's vision.

No one has carried that vision forward with greater expertise and dedication than Sir Joseph Rotblat. Much more will be said about Jo at a special ceremony on Saturday. I will just say that Jo Rotblat is a legendary figure in the nuclear disarmament movement. He was here at the original Pugwash meeting in 1957.

His last major statement took the form of a letter to the 2005 Non-Proliferation Treaty Review Conference and contained this passage:

Morality is at the core of the nuclear issue: are we going to base our world on a culture of peace or on a culture of violence? Nuclear weapons are fundamentally immoral: their action is indiscriminate, affecting civilians as well as military, innocents and aggressors alike, killing people alive now and generations as yet unborn. And the consequence of their use might be to bring the human race to an end. All this makes nuclear weapons unacceptable instruments for maintaining peace in the world.

These words are the quintessential Rotblat. They combine the intermingling of the scientist and the ethicist that characterized his personality. The language he used transcends religion as such, yet is deeply moral. It is the language that crosses all boundaries and becomes inextricably

cably interwoven with all the processes of daily life. It can resonate with politicians, who need to be able to relate to all segments of their constituencies.

Throughout Rotblat's work, the influence of the Russell-Einstein Manifesto of 1955 was always apparent. As the last survivor of the eleven signatories, Rotblat frequently quoted the stirring ending: "We appeal as human beings to human beings: remember your humanity and forget the rest."

Jo used those very words in the last lecture he gave at Pugwash, when he visited the Thinkers' Lodge in 2003. His lecture on that occasion was both a hail and farewell. His criticism of the nuclear weapons states was biting, his prescription eminently feasible, his attitude very hopeful.



*Douglas Roche and wife Patricia with Ron Joyce.*

## INTRODUCTORY REMARKS

RAYMOND SZABO,  
PRESIDENT, THE CYRUS EATON FOUNDATION

**T**hank you for this chance to speak about the Cyrus Eaton Foundation and my association with Mr. Eaton, which began when I went to work for him two months after the first Pugwash conference. By serving on the both the Foundation and the Pugwash Park Commission, I have tried to further the aims of Mr. Eaton, and of the Pugwash Movement, which he would surely call his life's greatest achievement.

Mr. Eaton was born in Pugwash in 1883, and though he lived most of his life in the States, he dearly loved his birthplace—a major reason he chose Pugwash for the first gathering of scientists in 1957. He also knew how vital it was to the conferences' success that they take place in a serene natural setting where participants could meet and relax. Many of you have been here before, so you know what an ideal spot it is. In my view, choosing Pugwash was one of the most important decisions of Cyrus Eaton's long and illustrious life; and this 50th Anniversary is a celebration not only of the Conferences, but of his vision.

My introduction to Pugwash, and Nova Scotia, came in 1958 when I accompanied Mr. Eaton to his summer home near Blandford — the first of many wonderful Nova Scotia summers for my family and me, and the start of my

longstanding relationship with Pugwash on many levels. After Mr. Eaton's death in 1979, I continued my work at the Chesapeake & Ohio Railway (later, CSX), retiring in 1987. I served on the Pugwash Park Commission and am currently the president of the Cyrus Eaton Foundation.

Even though the Foundation's primary focus is Cleveland and northeast Ohio, a major focus of our support is Pugwash—whether it be US Pugwash, International Pugwash, or the Pugwash Park Commission's stewardship of its historic properties. And recently, we helped Nature Conservancy Canada to protect the Pugwash River Estuary—a cause that would certainly gladden Mr. Eaton's heart.

In all that we do, we keep Mr. Eaton's ideals and objectives uppermost in mind. And now with the creation of The Pugwash Peace Exchange, these ideals, and the tradition of Pugwash as a place of education and peace, will be carried into the future.

On behalf of the Cyrus Eaton Foundation, I congratulate all of you for your enormously important work over the years. We look forward to your continuing efforts to create a world free of nuclear weapons.



***Stephen Leahey, John Finney, Paolo Cotta-Ramusino, Roméo Dallaire, Sandy Ionno Butcher, Premier Rodney MacDonald, Douglas Roche, Jonathan Granoff, and Colin Dodds as Joseph Rotblat's Nobel Peace Prize Medallion is Presented to Thinker's Lodge and the Pugwash Peace Exchange***

## The Pugwash 50th Anniversary Workshop: *The Imperative of Revitalizing Nuclear Disarmament*

*Co-Sponsored by the Pugwash Conferences on Science and World Affairs  
and the Middle Powers Initiative*

Pugwash, Nova Scotia, 5–7 July 2007

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### Report by

*Jeffrey Boutwell*

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### Preface

On the 50th anniversary of the first meeting of the Pugwash Conferences on Science and World Affairs, held in at the Cyrus Eaton home, Thinker's Lodge, in Pugwash, Nova Scotia, a distinguished group of 25 international specialists on nuclear weapons issues convened to discuss the urgency of revitalizing nuclear disarmament in order to free the world from the ever-present threat posed by nuclear weapons. Under the auspices of the Pugwash Conferences and the Middle Powers Initiative, the participants discussed a variety of measures that need to be taken by both the nuclear weapons-states and the non-nuclear weapons states who are members of the 1968 Nuclear Non-Proliferation Treaty in order to provide needed momentum toward the goal of declaring nuclear weapons illegal and immoral and eliminating them entirely.

The Pugwash Conferences and the Middle Powers Initiative believe strongly that global cooperation on an entirely new scale will be needed to eliminate the many common threats to humanity, including nuclear weapons. While the Pugwash 50th anniversary workshop focused on the nuclear threat, new modes of international cooperation will also be needed to tackle the many other global challenges that threaten basic human security, such as climate change, the scourge of HIV-AIDS and other diseases, the lack of adequate food, water, health care and education for many of the world's peoples, and environmental degradation. It is imperative that we recall the words of the 1955 Russell-Einstein Manifesto, of

“thinking in a new way” and “remembering our humanity”, as we seek to solve the challenges of the 21st century.

In their Manifesto, Lord Russell and Albert Einstein gave equal emphasis to the renunciation of war as an instrument of policy, and it is to that end that the Pugwash Conferences have focused on “practical non-proliferation” by focusing its work in precisely those regions where, should armed conflict occur, nuclear weapons could well be used.

### Introduction

Over the past several years, events around the world have conspired to seriously jeopardize the nuclear non-proliferation regime and increase the danger that nuclear weapons might be used in conflict for the first time since 1945.

Not since the dissolution of the Soviet Union and the end of the Cold War in the early 1990s have so many ominous threads converged to call into question the ability of the international community to both check the spread of nuclear weapons and reduce existing stockpiles that still number more than 25,000 such weapons.

Active negotiations between the United States and Russia, which between them control more than 95 percent of the world's nuclear weapons, are non-existent. While the Moscow Treaty calls for each country to reduce its arsenal to 1,700 to 2,200 each by the end of 2012, there are no provisions for destroying excess warheads (which can be kept in operational reserve), and each country is expected to retain many thousands of nuclear warheads—absurd numbers in today's international security environment.

Equally worrisome are rising tensions between Washington and Moscow over planned deployments of US missile defense systems in Poland and the Czech Republic, and the possible breakdown of two long-standing arms



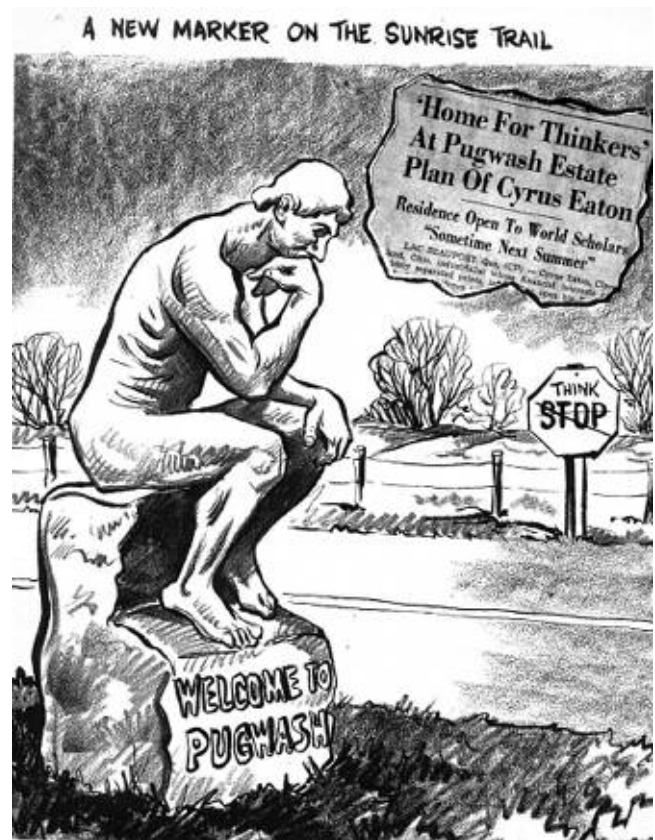
control agreements: the 1987 INF Treaty on intermediate-range nuclear forces, and the 1990 Conventional Forces in Europe Treaty.

The situation with the other existing nuclear weapons states—the UK, France, China, Israel, India, Pakistan, and North Korea—is hardly more reassuring. None of them are implementing the obligation, affirmed by the International Court of Justice in 1996, to pursue negotiations in good faith on nuclear disarmament in all its aspects under strict and effective international control. The UK and France have expanded their nuclear doctrine to include the threat or use of nuclear weapons in a wider range of circumstances. The UK has all but taken the political decision to modernize and extend its nuclear Trident submarine deterrent until the year 2050 or later.

As for the more recent nuclear weapons states—Israel, India, Pakistan, and North Korea—all of them live in dangerous and unstable neighborhoods. Advocates of nuclear weapons in these countries would argue that this is precisely why their countries need nuclear weapons, as a deterrent against existential threats to security. Should open conflict break out in any of these regions, however, the risk of nuclear weapons use will be dangerously high, with unimaginable consequences.

Moreover, the risks remain high of nuclear weapons spreading to more countries, and possibly to non-state terrorist groups. International concern over Iran's nuclear program is but symptomatic of the fact that some 40 countries around the world have sufficient know-how when it comes to uranium enrichment and plutonium reprocessing technologies to possibly have the capability of developing nuclear weapons. As we have seen recently with the interest shown by several states in the volatile Middle East—including Egypt, Saudi Arabia, the Gulf states, and Turkey—the nuclear program of a neighboring country (in this case, Iran) can initiate a chain-reaction of interest in mastering the nuclear fuel cycle.

The Pugwash 50th Anniversary workshop—*Revitalizing Nuclear Disarmament*—was co-sponsored by the Pugwash Conferences on Science and World Affairs and the Middle Powers Initiative from 5-7 July 2007 in Pugwash, Nova Scotia, site of the very first Pugwash meeting of scientists from around the world in July 1957. The findings of the Middle Powers Initiative through four meetings of the Article VI Forum, published in “Towards 2010: Priorities for NPT Consensus,” provided important inputs for the workshop discussion.



Although nuclear weapons have not been used since Hiroshima and Nagasaki in 1945, we are now entering an entirely new phase of the nuclear dilemma, where the proliferation threats posed by non-state terrorist groups and new nuclear-weapons states demand entirely new ways of thinking about nuclear weapons and security. As the Pugwash Council noted following its meeting in Hiroshima, Japan in 2005—with the evidence of the horrors of nuclear warfare still fresh for all to see—“as long as nuclear weapons exist, they will one day be used.”

The goal of eliminating all nuclear weapons is indeed becoming feasible, 50 years after the Pugwash Conferences committed itself to that objective. Mainstream political figures are coming to endorse the urgent need to move toward that end, as stated by George Shultz, William Perry, Henry Kissinger, and Sam Nunn, in their now famous opinion piece in the Wall Street Journal on 4 January 2007: *We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal.*

In May of 2007, in Vienna, the first PrepCom was held in advance of the 2010 NPT Review Conference. In comparison to the woefully weak conclusion of the 2005



NPT Review Conference, the 2007 PrepCom agreed on a modestly encouraging document that affirmed the Non-Proliferation Treaty as “the cornerstone of the non-proliferation regime”. The document further noted that “multilateralism and mutually agreed solutions... provide the *only* (emphasis added) sustainable method” for working toward nuclear disarmament and nuclear non-proliferation.

From many quarters of the international community, momentum is building to re-energize the campaign to control, reduce and eliminate nuclear weapons. The time for decisive leadership and action is now, before it is too late.

## Recommendations

### *Devaluing Nuclear Weapons—Now*

In order to make feasible and practical the goal of eliminating nuclear weapons, it is important to point out, as many military officials have done, that nuclear weapons have very little role to play in operational military planning, beyond that of providing existential deterrence. And, if nuclear weapons are only meant to deter the use of nuclear weapons by others, there is no justification for them in a world free of nuclear weapons.

Toward this end, the US and Russia must take lead in reducing the salience of nuclear weapons in their military doctrines. In 2001, Presidents Bush and Putin jointly declared that the US and Russia no longer “regard the other as an enemy or threat.” Yet thousands upon thou-

sands of nuclear weapons remain in the American and Russian arsenals.

Important actions that can convince the international community that the two major nuclear weapons powers are serious about devaluing the role of nuclear weapons in their security and foreign policies should include:

- The US and Russia should take immediate steps to de-alert the more than 1,200 warheads that each country has on high operational alert status, ready to be launched within minutes of an order to do so. Such warheads can be stored separately from their launch vehicles (missiles and aircraft), and strategic nuclear submarines can be kept in port, to increase assurances that neither country will launch their weapons through accident or miscalculation.
- The other nuclear weapons states (UK, France, China, India, Pakistan and Israel) should take all necessary steps to minimize the risk of nuclear use through accident or miscalculation.
- All nuclear weapons states should declare a No First Use policy, with explicit declarations that nuclear weapons, until such time as they are eliminated, will only ever be used in retaliation for a nuclear weapons attack against them. These so-called Negative Security Assurances (that nuclear weapons will never be used against those countries who have legally bound themselves not to acquire nuclear weapons) should be codified in a legally-binding instrument.



**John Eaton (grandson of Cyrus Eaton), Ramamurti Rajaraman, Alice Slater, Miguel Marin-Bosch, Jayantha Dhanapala, Li Hua, Tadatoshi Akiba**



Those countries not possessing nuclear weapons can take steps as well to advance the goal of a nuclear weapons-free world. As is the case with the chemical and biological weapons conventions, national legislation can be enacted making it a crime for their citizens to engage in nuclear weapons activities.

### *US-Russian Nuclear Weapons Negotiations*

Having made a firm commitment to the future elimination of nuclear weapons, Washington and Moscow must take the lead in greatly reducing their nuclear arsenals, destroying excess warheads, controlling and eliminating excess nuclear fissile material, and implementing effective transparency and verification measures. In particular, the US and Russia should:

- Negotiate a new treaty that will extend the 2002 Strategic Offensive Reductions Treaty (SORT) and provide effective verification and transparency measures for a total limit (operational and reserve) of no more than 2,200 strategic warheads for each country by the year 2012.
- The US and Russia should confirm their commitment to existing nuclear agreements, especially the 1987 Intermediate Nuclear Forces agreement negotiated by Presidents Reagan and Gorbachev that eliminated an entire class of nuclear weapons (all intermediate-range, ground-based nuclear missiles between 500 and 5,500 kilometers).
- Agreement should be reached on eliminating short-range nuclear weapons that are intended for forward-deployment, NATO should unilaterally withdraw all US nuclear weapons stationed on NATO territory, and the US and Russia should agree not to deploy their nuclear weapons on the territory of other states.
- The US and Russia should work together, with the international community, to ensure that the 1967 Outer Space Treaty is strengthened and that space remains free of weaponization.

### *Multilateral Nuclear Weapons Treaties*

Prompt action is needed on the following:

- The Comprehensive Test Ban Treaty (CTBT): While 138 countries have signed and ratified the 1996 CTBT, which prohibits all testing of nuclear weapons and devices, whether for military or civilian purposes, ten of the 44 states whose ratification is required for entry into force have failed to do so. The US, China and Israel have signed but not ratified the treaty, while India, Pakistan

and North Korea have neither signed nor ratified. The International Monitoring System for detecting nuclear explosions of as little as one or two kilotons will soon be completed (perhaps in 2007), giving high confidence of detecting any and all clandestine nuclear testing. First, though, those states such as the US who are behind in their financial contributions to the CTBO must make good their contributions so that the IMS can be fully effective. The entry into force of the first treaty to ban all nuclear explosions would signal the seriousness of the nuclear weapons states in living up to their NPT Article VI obligations to take significant steps towards nuclear disarmament, while greatly enhancing the non-proliferation norms of Article IV of the NPT.

- The Fissile Material Cut-off Treaty (FMCT): Under discussion since the 1990s, a FMCT would extend current IAEA prohibitions on the production of weapons-grade fissile materials in the non-nuclear weapons states to the declared enrichment and reprocessing facilities in the weapons-possessing states. In addition to prohibiting any further production of weapons-grade material, the FMCT should be expanded to include prohibitions on converting existing large stocks of civilian fissile material to weapons use, of banning the use of excess military fissile material for the production of weapons, and of controlling the highly enriched uranium (HEU) currently used in naval and civilian research reactors. The entry into force of a FMCT would, similar to the CTBT, be a significant signal to the international community on the feasibility of reaching a nuclear weapons-free world.
- NPT Governance: There is a demonstrable need for strengthening the oversight, implementation and enforcement mechanisms that can ensure compliance with the non-proliferation and disarmament obligations of the NPT regime. A combination of increased resources (staff and funds) and new provisions would greatly enhance the ability of the IAEA and the UN Office for Disarmament Affairs to undertake compliance assessment and enforcement, while greater political will and advance planning would allow the UN Security Council to decide on measures to be taken in the event of treaty violations and withdrawal.
- Strengthening and extending Nuclear Weapons-Free Zones: NWFZs prevent proliferation in regimes, provide security from the threat of nuclear weapons use, and advance the norm of non-nuclear security paving the





**Jayantha Dhanapala and Roméo Dallaire at Workshop Press Conference.**

way for a nuclear weapons free world. The NWS should acknowledge and respect all existing NWFZs by ratifying the appropriate protocols to the zones. States Parties to NWFZs are encouraged to enhance their cooperation in order to jointly promote nuclear disarmament initiatives. All efforts should be made for the establishment of additional NWFZs particularly in North East Asia, Central Europe, the Middle East and the Nordic/Arctic regions.

- Towards a Nuclear Weapons Convention: All States should affirm the goal of the complete abolition and elimination of nuclear weapons through a multilaterally verified instrument or package of instruments, i.e. a Nuclear Weapons Convention. Practical work should be undertaken to explore and advance the legal, technical and political requirements to make such a convention a reality.

### ***Civilian Nuclear Energy and Nuclear Weapons***

A renewed global interest in developing nuclear power is bringing increased demand for uranium enrichment and plutonium reprocessing capabilities. About a dozen countries currently possess full-scale facilities, including four non-weapons states (Brazil, Germany, Japan, and The Netherlands), while Iran is seeking to master the nuclear fuel cycle. Others, notably in the Middle East and Persian Gulf, have announced plans to develop such capabilities in the future. Given current weaknesses in the NPT regime to ensure that countries which possess nuclear-fuel capabilities do not divert resources and materials into producing nuclear weapons, the only short-term solution is a moratorium on the construction of additional enrichment and

reprocessing facilities coupled with an international mechanism for the production and delivery of fuel for civilian nuclear energy generation. In the long-term sustainable and environmentally sound alternatives must be further developed to eliminate demand for nuclear energy.

- In conjunction with a moratorium on the construction of additional enrichment and reprocessing facilities, the IAEA should establish an international fuel bank that can provide guaranteed supplies of nuclear fuel to NPT-compliant states.
- The international community must invest more in sustainable energy resources and devote substantial new funding to research and technology that can lead to new sources of energy generation that are not reliant on either nuclear power or fossil fuels.

### ***Disarmament as the Compass Point***

As noted in the Middle Powers Initiative document, "Towards 2010," the above measures are valuable in and of themselves. They decrease risks of use, diminish the access of terrorists to catastrophic weapons and materials to build them, raise barriers to acquisition by additional states, and generate support for strengthening the regime and resolving regional crises. Moreover, the measures pass key tests: they do not diminish the security of any state; they reinforce the NPT and enhance the rule of law; they make the world safer now; and they move the world towards the elimination of nuclear weapons.

Achievement of the measures is difficult, however, in the context of an unstable, two-tier world in which nuclear weapons seem to have a permanent place. Some weapons states will hesitate to reduce flexibility by agreeing to the CTBT, the FMCT, intrusive verification of reductions and de-alerting, and strengthened security assurances. Some non-weapons states will be reluctant to agree to further steps to ensure peaceful use of nuclear energy such as the Additional Protocol and multilateral regulation of nuclear fuel production and supply. Accordingly, implementation of the measures should take place in the context of a visible intent to achieve a nuclear weapons-free world, such as was manifested at the 2000 NPT Review Conference by the unequivocal undertaking of the weapons states to accomplish the total elimination of nuclear weapons.

In the wake of stalled progress over the past several years, meaningful disarmament measures are needed on the part of the nuclear weapons states, both in and of themselves, and to enhance non-proliferation efforts.





*Jayantha Dhanapala, Douglas Roche, Paolo Cotta-Ramusino, Jeffrey Boutwell, and Alexander Nikitin at the Workshop.*

### **A Global Campaign to Eliminate Nuclear Weapons**

In 1986 at the Reykjavik summit, Ronald Reagan and Mikhail Gorbachev laid out a vision of a world free of nuclear weapons. Their efforts led to an entire class of nuclear weapons—intermediate nuclear forces—being eliminated for the first time in the nuclear age.

In the more than 20 years since Reykjavik, despite the end of the Cold War, we have seen numerous missed opportunities for taking bold steps to implement this vision of a nuclear weapons-free world.

Momentum is building, however, for revitalizing global efforts to eliminate nuclear weapons. From the Blix Commission on Weapons of Mass Destruction, to the political efforts of Mayors for Peace, to the sober assessments of policy figures such as George Shultz, William Perry, Henry Kissinger, and Sam Nunn, a broader political coalition than ever before is uniting behind the need to eliminate nuclear weapons before we witness the catastrophic consequences of their use.

To help sustain and increase that momentum, national and international organizations should undertake broad public education efforts to inform political leaders and the global community of the need to act before it is too late. To an extent not seen since the nuclear atmospheric testing days of the 1950s and early 1960s, the international community at all levels must become engaged with the need to eliminate the threat posed by nuclear weapons. The world may have been lulled into a false sense of security given the fact that nuclear weapons have not been used since the Hiroshima and Nagasaki bombings in 1945, but



*Miguel Marin-Bosch, Emily Landau, Peter Jones, Marian Hobbs*

time is not on our side. The sober reality is that, as long as nuclear weapons exist, they will one day be used.

It is precisely to prevent such a catastrophe that the Pugwash Conferences and Middle Powers Initiative issue this call, on the 50th anniversary of the first meeting of Pugwash scientists in the small fishing village of Pugwash, Nova Scotia, that the international community galvanize its efforts to declare illegal and eliminate nuclear weapons forever.

*The Pugwash Conferences and Middle Powers Initiative express their appreciation to the Pugwash Parks Commission and Pugwash Peace Exchange for their help in assisting the Pugwash 50th Anniversary events. As is usual with Pugwash workshops, this report is the sole responsibility of the rapporteur.*



## PUBLIC SPEECH

TADATOSHI AKIBA,  
MAYOR, CITY OF HIROSHIMA

### *Nuclear-Free World from the Cities*

**M**r. chairman, Minister MacKay, Premier MacDonald, the Honorable Murray Scott, former Chief Justice of Nova Scotia Lorne Clarke, ladies and gentlemen, At this point, if I were to follow standard speech protocol, I would say that I am honored and pleased to be here celebrating the 50th anniversary of the Pugwash Conference. It is true that I am honored, and on behalf of the people of Hiroshima, I offer my heartfelt congratulations and gratitude for 50 years of devotion to the cause of nuclear abolition and world peace.

I am feeling again today the same honor and pride most Japanese felt 50 years ago when we found out that Dr. Hideki Yukawa and Dr. Shinichiro Tomonaga were among the prominent scientific leaders you asked to help address, on our behalf, the most serious threat to humanity.

Fifty years have passed since then, and we still have to worry about possible use of nuclear weapons, which is why I cannot say that I am happy that this conference has reached its 50th anniversary. Rather than happy, I am actually a bit resentful that we still have to be meeting like this.

This Pugwash Conference represents the wisdom of humanity. You are the elders, the wise persons of the human family. You are our scientists, scholars and intellectuals. You have studied the situation and have come to the conclusion that nuclear weapons should be abolished.

You have also inspired other intellectual and professional groups whose opinions world leaders should follow. In the early eighties, physicians around the world formed the International Physicians for the Prevention of Nuclear War, or IPPNW, and warned the world that once a nuclear war starts there is nothing physicians can do to cure the damage done.

In 1988, lawyers founded the International Association of Lawyers Against Nuclear Arms or IALANA. Now a full-fledged international citizens' organization with consultative status with the United Nations, IALANA developed a model Nuclear Weapons Convention that, if signed by all

nuclear weapon states, would be a practical and effective approach to realizing a nuclear weapon free world.

In 1996, the International Court of Justice, the highest court on this planet, took an unequivocal stand on this issue. The judges of the International Court of Justice found nuclear weapons to be illegal under international law, and they found unanimously that:

“There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control.”

As several people mentioned, former Secretaries of State Kissinger and Shultz, former Secretary of Defense Perry, and former Senator Nunn called last January in the Wall Street Journal for the total abolition of nuclear weapons. They are just the latest in a long line of former government and military officials who have called for the abolition of nuclear weapons, and leaders like this also constitute an important part of collective human wisdom.

Perhaps no group of people welcomed these strong calls for the abolition of nuclear weapons more than the hibakusha, who had felt so alone for so long. I believe the hibakusha are still among the least understood groups of people. Very few people know what they have actually gone through. And yet, everyone seems to take for granted their determination to eliminate nuclear weapons and countless courageous actions without even trying to imagine that it was a miracle that they came to their conclusion and continue their struggle.

To set the record straight, I have previously enumerated the three giant footsteps the hibakusha have left so far. Let me quote from the 1999 Peace Declaration:

There are three major contributions:

The first is that they were able to transcend the infernal pain and despair that the bombings sowed and to opt for life. I want young people to remember that today's elderly hibakusha were as young as they are when their families, their schools, and their communities were destroyed in a flash. They hovered between life and death in a corpse-



strewn sea of rubble and ruin—circumstances under which none would have blamed them had they chosen death. Yet they chose life. We should never forget the will and courage that made it possible for the hibakusha to continue to be human.

Their second accomplishment is that they effectively prevented a third use of nuclear weapons. Whenever conflict and war break out, there are those who advocate nuclear weapon's use. This was true even in Kosovo. Yet the hibakusha's will that the evil not be repeated has prevented the unleashing of this lunacy. Their determination to tell their story to the world, to argue eloquently that to use nuclear weapons is to doom the human race, and to show the use of nuclear weapons to be the ultimate evil has brought about this result. We owe our future and our children's future to them.

Their third achievement lies in their representing the new worldview as engraved on the Cenotaph for the A-bomb Victims and articulated in the Japanese Constitution. They have rejected the path of revenge and animosity that leads to extinction for all humankind. Instead, they have taken upon themselves not only the evil that Japan as a nation perpetrated but also the evil of war itself. They have also chosen to put their "trust in the justice and faith" of all humankind in order to create a future full of hope.

As peace-loving people from all over the world solemnly proclaimed at the Hague Appeal for Peace Conference this May, this is the path that humankind should take in the new century. We ardently applaud all of the countries and people who have written this philosophy into their Constitutions and their laws.

We should not forget that most countries on Earth oppose nuclear weapons, even though they have not written this opposition into their constitutions. Today, 113 countries are parties to nuclear-free zone treaties. The entire southern hemisphere is off-limits to nuclear weapons. In vote after vote at the UN, the international community expresses its majority will. Most recently, in October 2006, the First Committee voted 169 to 3 in favor of Japan's resolution to abolish nuclear weapons. In March 2005, an AP-IPSOS poll revealed that 66% of Americans favor the total elimination of all nuclear weapons. The fact is, the overwhelming majority of nations and people around the world wish to be liberated from the nuclear threat, and yet, the leaders of nuclear weapon states ignore that majority, and most of the media act as if the elimination of nuclear weapons were a non-issue, some sort of utopian pipedream that is not even worth discussing.

Let me tell you a story that illustrates the problem. I served as interpreter for a historic meeting between Akihiro Takahashi, one of Hiroshima's leading hibakusha who also served as Director of the Peace Memorial Museum, and Paul Tibbets, the pilot of the Enola Gay, the B29 that dropped the atomic bomb on Hiroshima. When these two men met, they both did their best to be polite. Takahashi did not have to say much because the massive damage done by that bomb was so obvious from his shriveled ears, permanently bent arm, and twisted fingers with a large, deformed black fingernail. Tibbets asked, "Was that caused by the bomb?" Takahashi answered, "Yes." That was enough. Mr. Takahashi's case was clear.

He explained the endless suffering of the victims, who were mostly civilian noncombatants, and concluded with the case for abolishing nuclear weapons to save humankind from utter annihilation. "No one else should ever suffer as I did," were his last words. When he was finished, Tibbets looked at him and said, "If I were ordered to drop that bomb today, I would do it again."

Paul Tibbets knew the suffering he caused. He knew that the indiscriminate slaughter of civilians is illegal under international law, and yet, his loyalty remained with his superiors, that is, he remained determined to carry out the orders he received from above.

There is something extremely top-down about nuclear weapons. They are controlled by a tiny cult of mostly men that appears impervious to democracy. Somehow, it seems this group can wave the words "national security" like a wand, and national politicians of all stripes completely forget their wise elders, international law, and the wishes of the people.

They take such a firm, unalterable and unanimous stand behind their nuclear weapons that now the media and the people don't even bother to challenge them any more. We can even say that the world has become convinced that nothing can be done about nuclear weapons.

Why is the nuclear cult so powerful? Why is it that national leaders so consistently reject or ignore democracy when it comes to nuclear weapons and other matters related to "national security?"

From our city-oriented point of view, one reason is that world leaders do not know the facts about nuclear weapons. That is why I frequently repeat my standing invitation to all national leaders to visit Hiroshima and Nagasaki. I do believe they should know what they are talking about when they talk about nuclear weapons. Knowing what actually happened in Hiroshima and





**Local artist Katie Hall presents her watercolor of Thinker's Lodge to Hiroshima Mayor Tadatoshi Akiba**

Nagasaki 62 years ago and understanding the hibakusha's message that came out of that experience could be the first step for them to forge the political will to eliminate nuclear weapons.

The City of Hiroshima, Hiroshima Peace Culture Foundation, the peace arm of the City of Hiroshima, and Hiroshima citizens have made all out efforts for more than sixty years to help the world understand the realities of the atomic bombing and support the plea of the hibakusha. We made a comprehensive list of what we can do and launched coordinated efforts to implement all of them. They include writing to our friends about the nuclear issue, strengthening peace education curricula in schools in the city, starting what we call Hiroshima-Nagasaki Peace Studies courses at colleges and universities round the world, holding A-bomb exhibitions world wide, and supporting efforts to make good movies about Hiroshima and Nagasaki, just to name a few.

There is another reason that the nuclear cult is so powerful despite our good and honest efforts. The international system under which our nations and our planet are governed is obsolete. It works most effectively and smoothly to block the formation of political will toward a nuclear-free world. It keeps people from working together to deal with matters of critical importance, such as the survival of the human race and the earth itself. President Eisenhower chose the expression "the Military-Industrial Complex" to warn us of this problem.

In the process of creating the political will required for the abolition of nuclear weapons, a major structural change in the international system will probably occur,

just as the end of the Cold War required and triggered major structural changes within the Soviet Union and the world order. The structural change I am talking about will help world leaders to base their decisions on the opinions of the vast majority of people on earth. I'm not suggesting that national governments somehow come up with a solution within the present paradigm. We actually need a new paradigm to accomplish our goal. If I may use a mathematical analogy, we need a higher dimensional model of the world when we deal with nuclear weapons issues.

One extra dimension is the collective voice of the majority citizens of the world, and this is where mayors can and must step in.

Let me illustrate this "extra dimension" by drawing a diagram. Suppose that our aim is to reach Point B, which is outside of this circle. We are leaving from Point A, inside the circle and we want to arrive without touching the circle, which represents the "obstacles". As long as we stay on this sheet of paper we can never reach Point B without touching the circle.

However, if we add one more dimension and try to reach Point B from Point A, we can easily accomplish our goal by "flying" from Point A to Point B. This is what I am talking about when I advocate that we need to "add an extra dimension".

When I became mayor of Hiroshima, I took on the responsibility of presenting a Peace Declaration every August. When I was first elected, I wanted to make sure that a strong case could be made for the mayor to present this Peace Declaration. Some have argued over the years that it would be more appropriate for the declaration to come from a hibakusha, or maybe from the prime minister of Japan. I have, however, come to the conclusion that a mayor is actually the perfect person to issue a peace declaration.

One reason I have come to this conclusion is that, although nations are the way we human beings now understand citizenship and war, cities are the way we understand suffering. I have recently visited Gernika, Spain, and Ypres, Belgium, for example. Both cities are as devoted as Hiroshima to remembering the tragedies they suffered in war and to preventing any repetition of such tragedies, not just in their own cities but anywhere on Earth.

People rarely suffer alone. The suffering of any individual is actually the suffering of at least a family, if not a neighborhood or a wider community, and a city is a vital, true and personally relevant level of collective identity. That is why we speak of Auschwitz, the My Lai massacre,



the Dresden bombing, for example, when we refer to these sufferings. And this is why cities that suffer massive destruction become cities that work for peace.

Suffering becomes an integral part of the collective memory, and peace is the natural answer to the question, how can we keep this from happening again?

Mayors generally arise from the collective consciousness of their city. We are close to our citizens. We suffer when they suffer. We are generally more honest than national politicians because we cannot deny facts. When garbage is left on a curbside or a pothole is left unfilled, we cannot pretend it is not there. We are relatively neutral in terms of ideology and other values in that we must collect garbage and build roads for all our citizens regardless of their political affiliations. To do our job under these conditions requires a rational, comprehensive worldview. As a result, mayors get used to relying on the advice of experts, and we need those experts to be right, not politically correct.

National leaders live far from the everyday realities of ordinary people. Although they command a broad national view of events, they do not normally feel the heartbeat of the people they govern. They can get away with ignoring important realities by “manufacturing” fictions and “manipulating” the media.

I should hasten to add “present company excepted.” What I am describing now is a general trend, and there are always exceptions. Contrary to popular belief, running a city is much more complicated than running a country. A country is a relatively abstract notion, with politics that are far more tolerant of internal contradiction. Cities are where real life takes place, with real problems that must be solved in real time. We are forced to identify and resolve our contradictions or conflicts because they are numerous, pressing, and concrete.

Given the closer relationship of cities to “reality,” it is obvious that the international system, which is so sorely and obviously lacking the basic skills of democracy and civilized behavior, requires far greater input from cities. We need to institutionalize a civil society-driven process, most notably exemplified by the one that led to the Anti-Personnel Land Mine Convention. We need a process that reflects city views and values when important decisions are made. We need to create some new and more democratic transnational structures. We need more intercity structures and agreements. Overall, we cities need to pool resources and work together to demand more rational, “bottom-up” democracy that respects facts, and the experiences and the values of average citizens.

This line of thinking applies most urgently to issues of grave importance to the survival of humanity, and nuclear weapons are a prime example. As I said earlier, the vast majority of nations and people on this planet want to see nuclear weapons eliminated. Somehow, we need to insist that overwhelming majority opinion be reflected in international policy and action. Mayors for Peace has been working to do just that.

In 2003, we launched what we called an Emergency Campaign to Ban Nuclear Weapons. Our primary demands have been for immediate de-alerting of all nuclear weapons, for immediate substantive negotiations toward a framework agreement, for the conclusion of such an agreement by 2010, and the total, physical elimination of all nuclear weapons and all weapon-grade fissile materials by 2020.

Because we are promoting our vision of a nuclear-weapon-free world by 2020, our campaign is now usually referred to as the 2020 Vision Campaign. In the 4 years since we began, our membership has grown from 440 city members to nearly 1700, and we now include the likes of Moscow, London, Paris, Beijing, New Delhi, Rawalpindi, and Jerusalem. I expect that Pugwash will join us soon!

In addition, the 1139 members of the US Conference of Mayors have three times, in 2004, 2006 and again this past June 25 in Los Angeles, passed by acclamation strong resolutions in support of our campaign. Also in June, the Council of European Municipalities and Regions recommended that our 2020 Vision project “Cities Are Not Targets!”—which I will speak about soon—be adopted by the Second World Congress of United Cities and Local Governments, to be held this October in South Korea. When the World Congress approves our campaign, which we have reason to believe it will, the largest organization of cities in the world, the organization recognized by the UN as the voice of the cities, will be calling for the elimination of nuclear weapons. At that point, we will be speaking for more than half of all human beings. This is not some random poll or wishful thinking by peace activists. We will actually be speaking for the cities of the world, and that should mean something. We intend to make it mean something.

Speaking as the highest court on earth, the International Court of Justice declared in its 1996 advisory opinion that nuclear weapons are illegal under international law. In July 2006, Mayors for Peace sought to draw attention to this landmark opinion by issuing a Good Faith Challenge. Our challenge to all nations, with or without



nuclear weapons, is this: Are you actually doing everything in your power to pursue nuclear disarmament? We are encouraging people everywhere to ask this question of their elected officials at all levels, and even of themselves.

At the same time, we launched what we call our Cities Are Not Targets project. In responding as cities to the Good Faith Challenge, we decided to demand assurances from all nuclear-armed states that they are not now targeting and will not in the future target any city for nuclear attack. Obviously, this initiative is not a selfish effort by cities to protect themselves at the expense of the countryside. Our goal is to bring attention to the fact that the nuclear-armed states do, in fact, have plans that, if implemented, would result in the total obliteration of many cities. We are also seeking to bring attention to the fact that any such attack is a war crime. In fact, according to the ICJ, even the threat is a war crime. We are attempting to deliver the message that we cities are no longer willing to serve as passive hostages to MAD threats and counter threats. We are demanding to live in a safer world.

I believe we are living in an extremely dangerous and confusing time of transition. The human family will decide in the next few years whether to eliminate nuclear weapons or allow them to spread uncontrollably to many more nations and even to non-state actors. For example, just last month, all of the frontrunners for the US presidency, in both the Republican and Democratic parties, unhesitatingly stated in response to direct questions that they are willing to use tactical nuclear weapons to prevent Iran from obtaining such a weapon. And these horrifying statements were met with almost no outrage in the US or around the world.

You do not have to be a hibakusha to know that if nuclear weapons spread, it is only a matter of time before they are used. You do not have to be a mayor or a scientist to know that if the so-called war on terror becomes a nuclear war, our fragile, interdependent civilization will crumble quickly. All hope for peace, justice and environmental cooperation will go up in radioactive smoke as we sink to fighting violently for physical survival.

As the hibakusha have always told us, the only way to survive is to eliminate nuclear weapons. What we need now is a global, grassroots groundswell of demand for a massive and sincere international effort to find and eliminate all nuclear weapons and weapon-grade fissile material. We know that we will have the cooperation of dozens of key nations.

Cities and local governments will be demanding that national governments, especially those of nuclear weapon states, finally listen to and respect the voices of the majority of the people on earth. What we need is enthusiastic, determined activity by NGOs, peace groups, environmental groups, social justice groups, and concerned citizens. This campaign could usher in an era of true democracy at the international level.

This is a victory the forces for peace can and must win. In fact, I believe it is the easiest global struggle we face. Eliminating nuclear weapons will be far easier than eliminating poverty, racism, social injustice or war. It is far easier than stopping global warming or pollution. Nuclear weapons are so obviously wrong; they are supported only by a tiny minority. The rest of us want them gone.

Nothing is more important in these next few years than preventing the spread and use of nuclear weapons. To that end, we need an active, energized, and determined Pugwash Conference out where it has always been, in the lead. Your leadership will challenge all of us to do more.

At the same time, all of us are challenged by the future generations. For example, at the 1992 Rio Earth Summit, a twelve year old Canadian named Severn Suzuki challenged all of us to live up to our words for the children of the future.

Let me quote:

At school, even in kindergarten, you teach us to behave in the world.

You teach us:

not to fight with others,  
to work things out,  
to respect others,  
to clean up our mess,  
not to hurt other creatures  
to share—not be greedy

Then why do you go out and do the things you tell us not to do?

Do not forget why you're attending these conferences, who you're doing this for—we are your own children.

You are deciding what kind of world we will grow up in.

Then she concluded by saying, "I challenge you, please make your actions reflect your words".

I would like to propose that we take up her challenge and make it our Good Faith Challenge from now. Working together, I do believe we can bequeath to our children a nuclear-weapon-free world by 2020.

Thank you.





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## Participants

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Mayor Tadatoshi **Akiba**, Mayor of Hiroshima, **Japan**; President of Mayors for Peace:

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Dr. Adele **Buckley**, Chair, Canadian Pugwash Group; Vice President, Technology & Research, Ontario Centre for Environmental Technology Advancement (OCETA), Toronto, Ontario, **Canada**

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Lt. Gen. and Sen. Roméo Alain **Dallaire**, OC, CMM, GOQ, MSC, CD, B.Sc.; former Force Commander of UNAMIR, the United Nations peacekeeping force for Rwanda between 1993 and 1994.

Amb. Jayantha **Dhanapala** (**Sri Lanka**), immediate past Under-Secretary-General for Disarmament Affairs, United Nations, New York, NY, **USA**

John **Finney**, Professor of Physics, Dept. of Physics and Astronomy, University College London, **UK**

Jonathan **Granoff**, President, Global Security Institute, New York, NY

Marian **Hobbs**, Minister of Disarmament and Arms Control of **New Zealand**

Dr. Peter **Jones**, Associate Prof., Graduate School of Public and International Affairs, University of Ottawa, **Canada**

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Senator Douglas **Roche**, O.C., Member, Pugwash Council; Chairman, Middle Powers Initiative; Author, Lecturer; Member of the Senate of **Canada** (1998-2004) and Canadian House of Commons (1972-84);

Amb. Mohamed **Shaker**, Vice Chairman, **Egyptian** Council for Foreign Affairs (ECFA), **Cairo**

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Prof. M.S. **Swaminathan**, President, Pugwash Conferences on Science and World Affairs; Chairman, National Commission on Farmers, Govt. of **India**



*50th Anniversary Dinner at the Pugwash High School.*



INTERNATIONAL  
**Herald Tribune**  
8 July 2007

## Mikhail Gorbachev tells international conference more work is needed to achieve nuclear disarmament

The Associated Press  
Published: July 8, 2007

**PUGWASH, Nova Scotia:** Mikhail Gorbachev told scientists and world leaders that more work is needed in the fight against a nuclear arms race during an international conference Saturday.

The last leader of the Soviet Union issued a statement Saturday to organizers at the Pugwash Conference on Science and World Affairs saying that discussions like the ones being held at this assembly of world leaders and scientists is a good start.

“It is good to know that the (conference) is an ongoing, vibrant project that continues to bring together concerned scientists who fully understand the responsibility to humankind,” Gorbachev said in a statement translated into English. Gorbachev did not attend the conference.

Experts from around the world first met in the small community of Pugwash, Nova Scotia in 1957 when a local-born philanthropist suggested his summer home would serve as a quiet and private place to discuss the threat of nuclear arms during the cold war.

Hundreds of meetings have since taken place throughout the world, and the so-called Pugwash movement was honored with the Nobel Peace Prize in 1995.

The latest conference, which ends Sunday, attracted two dozen international delegates including Tadatoshi Akiba, the mayor of Hiroshima, Japan, where one of only two nuclear bombs was ever used as a weapon.

Canada’s Foreign Affairs Minister Peter MacKay, Liberal Senator Roméo Dallaire and Nova Scotia Premier Rodney MacDonald, along with Akiba, were expected to address delegates Saturday night.

Gorbachev negotiated an arms-reduction treaty with U.S. President Ronald Reagan in 1987.

A 1991 treaty called for reduction of long-range U.S. and Russian nuclear missiles by about one-third, or to a maximum of 6,000 deployed strategic warheads, apiece. It is due to expire in December 2009.

The 2002 Moscow treaty went further, calling on each side to reduce its operationally deployed strategic warheads to 1,700 to 2,220.

In an exchange of data last January, the Russians claimed to have 4,162 strategic warheads, and the United States claimed 5,866 in the U.S. arsenal.

The Moscow treaty, which expires in December 2012, sets a limit of 1,700 to 2,200 operationally deployed warheads on each side.

The United States and Russia pledged earlier this month to reduce their stockpiles of long-range nuclear weapons to the “lowest possible level,” although they have not yet agreed on specific numbers.

“(We need to) build an intellectual foundation for agreements that would dramatically cut the arsenals of nuclear weapons on their way to their elimination and prevent an arms race in space,” read Gorbachev’s statement.

“We need your brainpower not just to analyze the problem, but to find solutions.”

While many delegates say the nature of a nuclear threat has changed since the Cold War, they agree the roughly 27,000 nuclear warheads that remain around the world should not be ignored.

Thousands of the weapons can be launched with a half-hour’s notice. Though most belong to the United States and Russia, countries including Israel, North Korea and possibly Iran are developing their own.

Those attending the conference plan to produce a letter to governments around the world, pressing their case to dismantle nuclear arsenals.



## 26th Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions

### *10 Years of the OPCW: Taking Stock and Looking Forward*

17–18 March 2007, Noordwijk, The Netherlands

#### Report by

*Katie Smallwood*

This was the thirteenth of the current Pugwash CBW workshop series to be hosted by Pugwash Netherlands. The Dutch Ministry of Foreign Affairs provided financial assistance for this meeting. It was the 52nd workshop to be held since Pugwash began organizing such meetings on CBW topics, in 1964.

Attending the workshop were 32 participants from 11 countries, all by invitation and in their personal capacities. This report of the workshop is the sole responsibility of its author, who was asked by the meeting to prepare a brief report in consultation with the Steering Committee. It does not necessarily reflect a consensus of the workshop as a whole, or of the Study Group. Attached to this report are the workshop agenda, a list of the papers presented, and the list of participants.

#### Lessons from the sixth BWC Review Conference

The workshop opened with a presentation on the outcome of the Sixth Biological Weapons Convention (BWC) Review Conference held in Geneva during 20 November–8 December 2006. It is important to understand that the background to this Conference was difficult: the

previous Review Conference held in 2001 (and suspended until 2002) had failed to produce a Final Declaration but had agreed on an intersessional programme for 2003–2005; and the fourth Review Conference, in 1996, had been shortened to two weeks, and proceedings were generally overshadowed by negotiations for the BWC Protocol. The 2006 conference therefore represented the first complete review in fifteen years.

Considering this history, the outcome of the sixth Review Conference was very successful, particularly in the consensus gained for the Implementation Support Unit (ISU), the intersessional programme 2007–2010, the initiative to enhance partic-

ipation in the Confidence-Building Measures, and the promotion of universalization. The presentation included a number of points judged pertinent to the impending second Chemical Weapons Convention (CWC) Review Conference, in April 2008, the following among them:

Much credit for the success of the BWC Review Conference was due to the skill of the President (Ambassador Masood Khan, of Pakistan) who accelerated the General Debate by not responding to niceties and imposing time deadlines on group and State Party statements.

Non-governmental Organisations (NGOs) participated to a much greater extent than seen at CWC



*Jonathan Tucker.*



*Georg Frerks, Arend Meerburg, and Julian Perry Robinson.*

Conferences of the States Parties in The Hague. In Geneva, NGOs were given the opportunity, and responsibility, to make statements during a designated informal session of the Review Conference.

Proposals for Action Plans on Implementation and on Article X (cooperation) were not agreed—this lack of consensus was in part due to late submission of the Article X proposal.

### **The Status of the Chemical Weapons Convention (CWC)**

A presentation on the status of the CWC began by recognising the number of contributions made to the Convention by Pugwash in general, and a number of individuals at the present workshop in particular.

On the topic of disarmament, it was stated that all possessor states had taken significant measures towards disarmament leading to the destruction of 25% of all category-1 chemical weapons. Russia's efforts to improve the speed of their destruction to meet their intermediate deadline—29 April 2007, for the destruction of 20% of their stockpile—was commended, as well as the start-up of two new destruction facilities:

Kambarka and Maradikovsky. Whilst hoping that the intermediate deadline would be met, the presenter was aware of discrepancies between current OPCW and Russian estimates, quoting 10% and 17% destruction respectively.

The United States has destroyed 40% of its stockpile, with all but two facilities in operation. The US has also restated commitment to the looming 2012 deadline for complete destruction of its chemical weapon stockpile.

In other possessor states, 80% of category-1 chemical weapons have been destroyed. The main issue here is the problems that Albania is expecting ahead of the imminent destruction deadline on 29 April 2007. At its most recent meeting, the Executive Council (EC) considered Albania's request for an extension to the deadline. In doing so the Council appreciated the degree of unexpected technical difficulty experienced by Albania; it assessed the unquestionable commitment of the state to its destruction programme; and it decided that the matter would be taken up at the next session of the EC after a progress report from the Director General on 25 April 2007.

This decision showed prudence on the part of the EC and the ability to judge individual issues on their own merit—a quality that may become important as the larger 2012 deadline approaches.

Universality still remains an important issue, and a priority for the CWC in the near future. The focus here should be on incorporating such states as North Korea, Egypt and Israel.

Industry verification has continued to be successful: over 1100 inspections have been carried-out in over 70 States Party; more than 5000 facilities have been declared under Article VI; and the number of declared Other Chemical Production Facilities (OCPFs) has increased exponentially. However, States Party must provide more comprehensive declarations, providing clearer details of what the facilities produce, in order for the OPCW to improve the selection of inspectable OCPFs relevant to the Convention, and the OPCW must implement a more proportional algorithm for the selection of such facilities.

Regarding implementation of Article VII (on national implementation), 97% of all States Party now have a National Authority, and over 41% of States Party have comprehensive legislation for implementing the treaty (the OPCW legal advisor expects an increase to 50% during this year). Concentration on States Party relevant to chemical trade is a priority for the OPCW now that general progress has been achieved. During the discussion prompted by this presentation, a number of points were made, for example; it was noted that as well as increased numbers, there had been a notable quality jump in the implementation of

Article VII. Furthermore a suggestion was made that the Action Plan for Implementation should be regarded as a continuous process as the understanding of Article VII has changed with time and will continue to do so. The implementation of this Article might also be a useful tool for addressing new and specific challenges to the Convention, whilst also improving the CWC in a general manner.

Challenges to the CWC include delays in the destruction of chemical weapons; universality; practical implementation; enhancing the depth and reach of OCPF inspections; and remaining relevant to current science and technology. But although a number of these challenges will surely be discussed at the second CWC Review Conference, the presentation stipulated that one shouldn't fall into the temptation of discussing certain issues prematurely. In discussing whether the implementation of the General Purpose Criterion (GPC) should be discussed at the second Review Conference, it was stated that anticipation and pre-emption should be carefully balanced against the dangers of ill-informed debate.

The implementation of tenure policy within the OPCW Technical Secretariat remains controversial. Safeguards are being applied to the Organisation's institutional memory, for example through the continued involvement of oldtimers through consultancy arrangements. It is recognised that the need to retain skills must be balanced with not allowing the monopolisation of knowledge. Thus the tenure programme should strengthen rather than weaken the Organisation as a whole. On the other hand, certain problems have occurred with young, non-career staff

remaining in the Organisation for only short periods of time.

The last topic addressed was the OPCW's tenth anniversary, where the preparations continue to advance well. The events in a number of countries will demonstrate that there is no legitimacy in pursuing chemical weapon programmes and that states outside the Convention must join.

### **Preparations for the Second Review Conference**

A presentation was made on the progress of the Open-Ended Working Group's (OEWG) activities in preparation for the upcoming Review Conference to be held in April 2008. The review process, compared to the first Review Conference, was started at an earlier date and outside contributions, such as background papers from Non-Governmental Organisations (NGOs), are also to be brought in earlier, in order for them to have a greater impact on State Party policy. The deadline for NGO submissions to the OEWG will be 1 July 2007. The chair of the working group has sought to focus discussion on post-2012 challenges.

NGO involvement at the Review Conference has been widely discussed, with some States Party having reservations about NGO participation, being concerned about politically difficult or irrelevant NGOs. However, many delegations are more in favour of NGO involvement since the positive experience of the Sixth BWC Review Conference in 2006. Noted in the workshop discussion, was that in the past the exclusion of certain NGOs had created more publicity than if they had been allowed to attend. And also that involving the NGO community would promote transparency and



*Daniel Feakes and Ian Kenyon.*

help engage the public through "fringe" activities that could run parallel to the conference itself.

During subsequent discussion of this presentation it was stated that there are already signs that Russia is cutting corners on the destruction of its stockpiles. This would no doubt be discussed at the Review Conference, but it was important that discussions of this nature do not affect confidence in the OPCW.

### **Destruction of Chemical Weapon Stockpiles**

The presentation given to the workshop on the destruction of stockpiles focused mainly on Russian and US efforts to reach the 2012 deadline for complete disarmament. As referred to above, Russia has so far completed between 10% and 17% of its destruction and is due to reach its intermediate deadline for 20% destruction in April of this year. Three facilities are in operation, namely Gornyy (1,142 metric tonnes), Kambarka (6,349 metric tonnes), and Maradikovskiy (neutralisation of 13,692 bombs). However there are four sites yet to begin destruction, and for some the delay is partly due to the deterioration of international relations between Russia on the one hand, and Italy and the US on the other. Concern has also been expressed that, in racing to meet the 2012 deadline, Russia may begin to



*A Stroll on the Beach.*

cut corners in terms of protecting worker safety, neighbouring communities and the environment.

The US has destroyed 40% of its chemical weapon stockpile, its destruction programme is progressing in all but two facilities, Pueblo and Blue Grass, where there has been a collapse in funding.

There are also inconsistencies between US and Russian declaration practices, specifically on the question of at what point in the destruction process chemical weapons can be declared as destroyed. This issue needs to be resolved with the guidance of the OPCW.

The OPCW and the States Party should bear the following points in mind as 2012 approaches:

- the challenges in meeting the 2012 destruction deadlines should be discussed in public during the tenth anniversary celebrations later this year;
- however, it is important that the emphasis remains on the universality of the CWC, especially at

bringing in countries such as Egypt, Israel, Lebanon, North Korea, Syria and Somalia;

- pressure must be placed on States Party to fully fund their destruction programmes and Global Partnership schemes need to be implemented adequately with states providing the amounts they promised;
- relations in this field between Russia and the US must be improved no matter how difficult this may be; and
- although Russia and the US would be in non-compliance with the Convention if they miss the 2012 deadline, in view of the efforts they have put into the process of destruction, the two States Party should not be punished.

### **Sea-dumped Chemical Weapons**

The paper given on the status of sea-dumped chemical weapons under the CWC emphasised some of the problems that might arise from chemical weapons dumped at sea prior to

1985—the cut-off date for them to become exempt from Articles III and IV of the CWC.

The Baltic Sea is a particular concern as chemical weapons dumped after the Second World War are resurfacing in fishermen's nets and in other cases, the wooden boxes in which they were buried have drifted (this is a problem specific to shallow-water dumping rather than deep-water dumping). In addition, recent pipeline projects—such as the proposed Baltic Sea gas-pipeline from Germany to Russia—have ignited strong debate over the implications of disturbing chemical weapon sea-dumping sites.

It is possible to identify a number of basic principles that should be followed in the treatment of sea-dumped chemical weapons, these are summarised as follows: recovered chemical weapons should be and remain the responsibility of the State Party that recovered them (the State Party in question would *not* become a possessor-state as defined by the CWC); the State Party should then voluntarily declare the nature and quantities of the material; and it should then come under the destruction and verification activities of the CWC and should be disposed of under the same rules as “toxic waste”.

Careful consideration of the possible environmental hazards from purposely recovering sea-dumped chemical weapons, especially if no destruction resources are available, must be given before a State Party decides to embark on such a project.

### **CWC Compliance, Transparency and Civil Society Involvement**

The discussion generated by the presentation of a paper on CWC

compliance focused largely on the role of civil society and transparency in implementing the Convention.

There was no *one* view on the issue of transparency, but a general theme was that the consequences of increased transparency could be both positive and negative: democratic accountability is hugely important but should be balanced against possible effects such as decreased industry involvement, slower decision-making procedures, and an increased terrorist threat. It was also noted that in an international organisation that represents its member states, it is the member states who should be targeted to increase transparency.

In the related area of increased civil society involvement, which was taken up a number of times during the workshop, the main theme centred on how this would actually take place considering the restricted involvement at present.

### **Status of the CWC and Activities of the Scientific Advisory Board**

The discussion moved on to the status of implementing the CWC ten years after entry into force, with a presentation on the activities of the OPCW Scientific Advisory Board (SAB). In terms of current SAB projects, there are four main areas:

- *Biomedical sampling and analysis:* *in vivo* sampling may be required at an alleged-use inspection site in cases such as the late arrival of inspectors or when the involvement of volatile chemicals is suspected, but it remains a very delicate issue. There are only 3 or 4 labs in the world that are equipped to perform these tests.
- *Sampling and analysis:* these measures would upgrade current

verification methods by allowing the use of liquid chromatography/mass spectrometry (LC/MS) technology to perform the analysis of certain toxins (there are two well-known ones on the Schedules).

- *Education and outreach:* In conjunction with the International Union for Pure and Applied Chemistry (IUPAC) a project is aiming to introduce CWC issues—which are infrequently known to most chemists—into university curricula and promote codes of conduct for those using chemicals and engaged in the life-sciences.
- *Preparations for the Second Review Conference:* the progress here relates to the discussion on advances in science and technology summarised below.

At the first CWC Review Conference in 2003, developments in science and technology were examined on only a superficial level during the actual Review Conference. This was a result of reluctance—on the part of a few States Party—to discuss some of the recommendations of the SAB. The recommendations in question related to modifications in the schedules; submitting data on novel agents; and measures to deal with unscheduled toxic chemicals.

However, it is expected that the Second CWC Review Conference will approach consideration of the implications of advances in science and technology in all their aspects. For example, there is scope for some areas of change to be clearly defined; for the numbers of expert groups on new technology to be enlarged; and to effectively assess the respective benefits and dangers of new technologies. It was also noted that the SAB Report for the Second Review Conference will be distributed at a

much earlier stage than in 2003, recognising the fact that the background papers for the First Review Conference were released too late to influence state delegations.

### **Challenges to the Chemical Weapons Convention**

This presentation outlined six categories of challenge to the CWC that hold particular danger if not countered. The first, new utilities for chemical weapons, is brought about by the changing context of warfare which could lead to a more “favourable” environment for the use of chemicals; also by new science and technology enabling new targets; by changes in demand, illustrated by counter-terrorism measures. The General Purpose Criterion, properly implemented, is the safeguard. It was noted too that the use of chemicals against terrorists is, as in war, likely to be ineffective once the terrorists develop protective measures against them.

Second is the threat of proliferation which could seriously undermine confidence in the regime, this threat must be fully examined and countered by effective control regimes as regards intangible and dual-use technology—concepts that are poorly understood by many in the field.

Another challenge lies in the convergence of chemistry and biology. Linkages between the BWC and the CWC are becoming more and more important; in fact there are compelling arguments to bring the treaties together in certain of their respects. The OPCW, overseeing the more comprehensive of the two treaties, should take the lead.

Fourth is the threat posed by political expediency, or the prioritisation of national interest, rather than

giving full value to the Convention. This happens and will continue to happen because States Party are able to overrun the independence of the OPCW and exploit the ambiguities of the Convention text.

Pernicious ignorance on the part of some States Party executives represents the fifth threat. Some examples of this come from State Party perceptions of certain issues, including the reluctance of some to recognise the General Purpose Criterion; the treatment of riot-control agents (RCAs); and the surprisingly common incorrect belief that the CWC does not cover toxins.

The final and sixth threat comes from the creeping legitimisation of chemical weapon use; the idea that some chemical weapons might be less reprehensible than others. This concept is most widely observed in the renewed interest in the development of “non-lethal” chemical weapons and corresponds to a slippery slope towards erosion of the spirit of the CWC.

These challenges therefore demand a much deeper understanding of the issues in — and contribution to the debates from — civil society. In addition they require, in the least, a reaffirmation of the General Purpose Criterion, even if translated into more easily comprehensible language, at the Second CWC Review Conference.

### **The General Purpose Criterion**

This presentation examined the implementation of the General Purpose Criterion recognizing that the onus is primarily upon States Party to do this. It went on to explore ways in which the implementation of the General Purpose Criterion could be augmented by other international

activities relating to chemicals such as the Strategic Approach to International Chemicals Management (SAICM) agreed in Dubai in February 2006 and now being taken forward by both UNDP and UNEP and activities relating to health and safety such as the REACH initiative that will apply to all countries of the EU. Mention was also made of the relevance of the February 2007 UNEP Decision (24/4) on Prevention of Illegal Trade in Chemicals and it was suggested that the OPCW should participate in such activities in a similar way to that in which the OPCW participates in the Green Customs Initiative. In discussion, it was recognised that the General Purpose Criterion could be taken forward as part of the ongoing OPCW actions on national implementation (Article VII).

### **Transfers of Dual-use Chemicals**

The next paper outlined ways in which the CWC regime on the transfer of dual-use chemicals could be strengthened, arguing that the current level of implementation of the export control system is inadequate. The presentation concluded with four recommendations: (1) that the accuracy of aggregate data submitted by States Party should be improved, although it was noted that accuracy had improved recently and there were fewer discrepancies if data were analysed over a longer period of time; (2) an improved outreach to the chemical industry to promote a certain self-regulation from industry; (3) that formal measures should be introduced by the OPCW to verify trade restrictions, and; (4) that the Implementation Action Plan should be renewed, and strengthened, at the Second CWC Review Conference.

The harmonization of various trade regimes (such as the CWC, the Australia Group) would make the control of transfers more efficient but it would also be difficult for a number of reasons, including, that it would be very difficult to replace the relatively extensive provisions of the Australia Group, and effective implementation by all States Party is unlikely.

Discussion of potential changes in the CWC schedules highlighted the need to consider revision as they are the basis for the verification system and it must not become irrelevant, but also recognised the negotiation nightmare that this would entail (even though processes for doing so are provided for in the CWC text).

### **Interpreting the CWC—Law Enforcement and Riot Control**

The dispute over the interpretation of certain aspects of the Chemical Weapons Convention was addressed in the context of the relationship between riot control and law enforcement. The constructive ambiguities built into the Convention text mean that different interpretations are tenable, and some interpretations will provide powerful challenges to the Convention, particularly in the debate around so-called non-lethal chemical weapons.

### **CWC Briefing Book Proposal**

An introduction to the BWC Briefing Book that the Harvard Sussex Program had, in conjunction with BASIC and VERTIC, produced to assist States Party in their preparation for the Sixth BWC Review Conference allowed the workshop to make suggestions on how the concept could be applied to the CWC Review Conference, bearing in mind the differences between the two regimes,



most notably, the presence of the OPCW.

Among the views put forward were: that such a briefing book should be written with at least some coordination with the OPCW; it should be broad enough to encompass viewpoints from developing countries; it should include background papers on issues relating to the Chemical Weapons Convention; that it should remain (as much as possible) a non-biased compilation of documents; the book should be targeted at diplomats with either little familiarity with the field or a lot on their agenda, and; the writers should be aware that it might be viewed as a western, academic perspective, so the possibility of endorsement from a non-western NGO should be explored.

### **New Actors and the Globalisation of CBW Technologies**

On this topic the workshop was told about a research project currently in progress. With a general change in diplomacy away from governments and towards governance systems, the increasing globalisation of dual-use chemical and biological technologies has presented an opportunity for the implementation processes of the two CBW regimes to be decentralised. This more inclusive approach has brought in a number of non-state stakeholders (among them industry, regional organisations and civil society) that have a role in the framing of issues, for example, the capacity of the International Union for Pure and Applied Chemistry for framing aspects of the CWC Review Conference agenda. The project is to produce 'regulatory maps' to identify actors in the CBW field and will look

at: who they are; where they are; what they do; and how they do it. It will also examine the overlaps between new and old actors in the field.

The discussion of this research focused mainly on the comparisons between the chemical and the biological weapon fields, and on the current lack of non-state actors active in the chemical weapons area. However it was said that the post-2012 era CWC would invite a number of new actors due to the focus on trade and export controls.

### **Chemical Defence**

A short presentation was delivered on the changes in the context of chemical warfare under the CWC regime and consequences for military chemical defence. It argued for a new chemical defence doctrine that would reduce the amount of defence required due to changes in threats, and in military conduct. It was noted however, that toxic industrial chemicals would present a more difficult undertaking from the perspective of chemical defence because the military are not trained for such attacks. It was also suggested that should funding be taken away from military defence, it should be redistributed to first-response teams such as the fire-fighters and the police. Other views were that chemical defence could never be done away with and it was less relevant in the context of terrorism, since entire populations could never be protected.

### **The Misuse of 21st Century Chemistry**

The final presentation addressed developments in science and technology, particularly in the areas of pharmaceutical research and drug

development, and how they are addressed by the CWC. It argued that programmes in chemical and biological warfare have always reflected current levels in science, with some being 'piggy-backed' onto scientific developments, and that a greater engagement of scientists was needed. The speaker hoped that a re-run of the First CWC Review Conference would not be repeated whereby the review of science and technology had been driven underground after the Scientific Advisory Board's report to the OPCW Director-General.

Discussion emphasised the convergence of scientific disciplines as a challenge to the CWC and the possible need for another international body to screen changes in science and technology. It was also highlighted that the Open-Ended Working Group for the Second Review Conference was addressing the subject and would welcome written contributions on the subject, and that the SAB report was targeted for July.

### **Future Work**

The date for the next workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions in The Netherlands was discussed and it was concluded that it should be around the second CWC Review Conference, but that the exact timing would be confirmed at a later date. This concluded the proceedings of the meeting.

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## Final Agenda

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### Introductory Session

Welcome

Report—BWC Sixth Review Conference outcome

### 10 Years of the OPCW: Taking Stock and Looking Forward

OPCW on the eve of its 10th birthday—main achievements and challenges

Progress report on the OPCW/PC History project

CW destruction—what is needed to wind up by 2012 and what if....

Analysis of the reasons for delays so far

- *Is 2012 achievable and what is needed?*
- *Towards a CW-free world?*

Challenges and trends

General Purpose Criterion: implementing it adequately

Technology Transfer and Dual Use

Chemical Terrorism, Law Enforcement and Disabling Chemicals

- *Globalization*

Future of verification and compliance

What can scientific developments offer to the OPCW?

The Second CWC Review

Progress report

- *What would be a successful outcome for the Second CWC Review Conference (April/May 2008)?*

**Future work.**

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## Papers

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### DISCUSSION PAPERS

**Walter Krutzsch:** Law enforcement including domestic riot control: The intent of the CWC negotiators

**Walter Krutzsch:** Compliance with the CWC

**Jiri Matousek:** Status of implementing the Chemical Weapons Convention ten years after Entry into Force, and the way ahead

**J P Perry Robinson:** Categories of Challenge now facing the Chemical Weapons Convention

**Graham S. Pearson:** The Challenges to the Chemical Weapons Convention (plus PPP)

**Jonathan B. Tucker:** Strengthening the CWC Regime for Transfers of Dual-Use Chemicals

**Jonathan B. Tucker:** Historical Research Note: Incapacitating Agents and the East German Ministry for State Security (“Stasi”)

**Jan Medema:** 10 Years of CWC (1987-2012): Does it make a difference (plus PPP)

**Thomas Stock:** Sea-Dumped Chemical Weapons under the CWC: More Questions Than Answers?

**Daniel Feakes and Caitriona McLeish:** New actors and the globalization of CBW technologies

**Daniel Feakes and Caitriona McLeish:** A proposal for a resource guide/ briefing book for the 2008 CWC Review Conference

### POWERPOINT PRESENTATIONS

**Paul Walker:** An Update on Russian and US Chemical Weapons Destruction.

**Graham Pearson:** Outcome of the BWC Sixth Review Conference.

### Background papers

**Alexander Kelle:** The Changing Scientific and Technological Basis of the CBW Proliferation Problem, in Science and Technology Report no. 7, Bradford Dept of Peace Studies, from the workshop on “Preventing the Misuse of 21st Century Chemistry: State of the Art of Drug Development and Delivery, and Selected Enabling Technologies, Belfast, 13-14 January 2006.

**Ralf Trapp:** The First Ten Years, in Ian Kenyon and Daniel Feakes (editors), *OPCW: The Creation of the Organisation for the Prohibition of Chemical Weapons: A Case Study in the Birth of an International Organisation*, The Hague: T.M.C.Asser Press, 2007, pp 261-89.

## Participants

Mr. Alessandro **Argentini** (Italy), Chief Examiner, European Patent Office, Rijswijk, The Netherlands

Amb. Sergey **Batsanov**, Director, Geneva Office of International Pugwash; Member, Pugwash CBW Steering Committee; Senior Consultant, Geneva Centre for the Democratic Control of Armed Forces (DCAF)

Mr. Richard H. **Burgess**, Consultant in Trade and Treaty Compliance, Newark, Delaware, USA, formerly: Senior Counsel, DuPont Legal

Mr. Malik Azhar **Ellahi**, Head of Government Relations and Political Affairs Branch, Organisation for The Prohibition of Chemical Weapons (OPCW), The Hague, The Netherlands

Mr. Daniel **Feakes** (UK), Research Fellow, Harvard Sussex Program SPRU-Science & Technology Policy Research, The Freeman Centre, University of Sussex, Brighton, UK

Prof. Georg **Frerks**, Professor of Conflict Prevention and Conflict Management, Centre for Conflict Studies, Utrecht University, **The Netherlands**; Professor of Disaster Studies, Wageningen University; Chairman, Pugwash Nederland

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## Participants, continued

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## Pugwash Workshop on *The Prospects for Iraq*

11–13 May 2007, Erbil, Iraq

### Report by

*Saideh Lotfian\**

### Introduction

Pugwash convened an international workshop on Iraq's crisis of instability in Erbil, the northern Iraqi capital of the Kurdistan Regional Government (KRG), from 11 to 13 May 2007, and gathered participants from Egypt, Iran, Iraq, Italy, Jordan, Turkey, the United Kingdom and the United States. The twin objectives of the meeting were a) to gain insight into the root causes of the Iraqi conflict situation; and b) to find ways to deal with the sectarian violence and other types of conflicts in order to help the de-escalation of the crisis. The Iraqis were prominently represented by a group of diplomats, academicians, members of Iraqi Council of Representatives, members of Iraqi Cabinet, members of Iraqi Minorities Council, members of the KRG's Council of Ministers, members of Mosul Governate, a representative of the influential Shiite cleric Muqtada al-Sadr, and other senior government officials. Regrettably, the invited Sunni politicians from Baghdad did not attend the workshop in Erbil. At the conclusion of the workshop Dr. Paolo Cotta Ramusino, the Secretary General of Pugwash decided to travel to Baghdad to talk with some of them.

### The Causes of the Iraq's Sectarian Violence

The first topic of the discussions was the nature and the causes of the sectarian violence in Iraq. The participants expressed two different views:

1) Some Iraqi participants emphasized the external factors which create and inflame this kind of clashes in Iraq. They argued that the sectarian violence is a new phenomenon in Iraq, which is a multiethnic and multi-linguistic society composed of Arab, Kurdish, Assyrian, Turkman ethnic groups as well as Shiite

Muslim, Sunni Muslim and Christian religious groups. These different ethnic and religious communities of Iraq had coexisted peacefully. Of course, there were enmity and even armed conflicts among the rival Iraqi groups, and the totalitarian regimes in Baghdad had used violent means to repress the ethnic and religious minorities like the Kurds and the Shiites. After the overthrow of Saddam Hussein's regime in 2003, Al-Qaeda operatives penetrated Iraq and used violent tactics to destabilize the country. The foreign members of



this terror organization have been supported by Saddam Hussein's intelligence agents and the Baathists<sup>1</sup> as well as some neighboring countries who want to disrupt the process of political development in the country. A number of Iraqi participants claimed that the presence of the foreign forces is one of the reasons why the Iraqi people cannot live in peace. It was noted that there are more than 90 intelligence and security agencies operating in Iraq today, and each has its own agenda. The foreigners create and feed the violence.

2) Another group of Iraqis maintained that the continuing fighting between the religious and ethnic factions in Iraq is caused by two sets of domestic factors: a) the religious and ethnic persecution of Shiites, the Kurds and other ethnic minorities by the old regime; and b) the post-war de-Baathification and the dissolution of Iraqi army which resulted in the removal of Saddam's loyalists and Baath Party members in the Iraqi military and government establishment. An Iraqi participant classified the Baathists into three distinct groups: The first and the largest group is composed of 70% of the Baath Party members who were forced to declare themselves Baathists to be able to survive under the old regime. The second group is made of the ideological Baathists who believe in the ideology of the Baath Party. Finally, the last and the smallest group of Baathists belongs to the criminals who should be punished for assisting the former President in committing his crimes against the Iraqi people. They are accused of being involved in the large-scale killings of civilians during the 1988 Anfal campaign against the Kurds

which included the use of chemical weapons against innocent Iraqis, and the oppression of the Shiites in south-central Iraq. In Iraq today, these former hard-core Baathists and supporters of the Saddam's regime are ready to do everything in their power to eradicate every one who comes in their way. They are sabotaging the Iraqi government's efforts to stabilize the country.

However, the conclusion was that the occurrence of violence in Iraq cannot be blamed only on the domestic factors. The extremist Baath sympathizers have introduced Al-Qaeda terrorists to the Iraqi theatre. The foreign agents are recruited outside Iraq and then sent to commit acts of terrorism inside the country.

### **Reconciliation and other Constructive Measures to Confront the Violence**

Since the beginning of the Iraq war in March 2003, hundreds of thousands of Iraqis have died and millions of Iraqis have been displaced as a consequence of this violence. The security situation has deteriorated drastically. Every one agreed that there is a need to find a way to end the killing of innocent civilians. To remove causes of violence, the participants suggested the following measures:

Encourage all communities to solve their problems through dialogue not fighting. The solution should come from inside Iraq by the Iraqis.

Condemn all suicide bombings and other acts of violence. An Iraqi participant pointed out that a major contributing factor of instability is the ambiguous attitude of some Iraqi officials who denounce these acts in public but in reality are in favor of

such atrocious deeds.<sup>2</sup> It was pointed out that the religious authorities must publicly and strongly condemn these acts of terrorism. When Abu Musab Al-Zarqawi, a Jordanian-born Sunni militant with close links to Osama Bin Laden's al-Qaeda network was killed in a U.S. raid, some Islamists in Jordan and Egypt called him a martyr. His policy of targeting Shiites and the Shiite holy sites was part of his overall strategy of inciting sectarian violence as a means of undermining the US military presence in Iraq and Afghanistan. Strong denunciation of terrorist acts by Iraqi religious authorities can prevent the escalation of this conflict to a civil war.

Encourage the participation of all legitimate factions in the Iraqi government. Every single Iraqi has a right to have a say in the government and enjoy full rights. Some Iraqis think that they are marginalized and are powerless within the existing system. A participant who argued in favor of Iraqi national unity warned that the situation should not be treated as a zero-sum game. "Together, everyone achieves more. Alone, every one loses" was his slogan.

Start an intensified campaign by the government to inform the people of the true meaning of federalism. As one participant pointed out the average Iraqi believe that federalism divides their country, and is only beneficial for a minority. The Iraqi politicians should correct this misunderstanding. Not surprisingly, the Iraqi Kurdish participants spoke in favor of federalism and argued that every nationality in every region should be given local autonomy and regional independence. Kurds, Christians, Assyrians, Caldonians and all

Muslim sects should be able to fully enjoy their ethnic and religious rights.

Reunite the people by a carefully-managed process of reconciliation. There has been a dangerous tendency to accuse all the Baathists or the former government officials as the supporters of the old regime. Several participants made a distinction between the segments of Saddam's regime (e.g., *Mokhaberat*, the Republican Guards) who were paid to be killers and the Baathists who were not part of this "killing machine". These people should be given a chance to apologize for their shares in the crimes committed by the dictatorial regime of Saddam Hussein in order to be incorporated into the Iraqi society.

Single out the criminal gangs who are terrorizing the population. Some warring factions in the Iraqi streets are criminals and have criminal intentions. Saddam Hussein had encouraged organized crimes. Now, the difficult task is to distinguish between the acts of violence committed by these criminal elements and the destabilizing acts committed by the insurgents or terrorist groups with political goals. To facilitate law enforcement, the weapons which are in the hands of the people should be collected. The Iraqi government should devise a plan to collect these weapons. For example, the Baghdad government can announce its plan to purchase the weapons from the people who own them.

### **The Oil Issue and the Distribution of Resources**

Next, the discussions were focused on the issue of the distribution of the oil wealth which is vital for Iraq because of its heavy dependency on



its oil revenues. An Iraqi government official said that "we are in the process of having an oil-gas sharing formula to benefit all Iraqis." It was stated that the Hydrocarbon Law and the equitable distribution of the oil income were among the subjects of intensive debates in the cabinet. In addition to this law, there are two other laws drafted by the Energy Council. One of which is a draft law for the Iraqi National Oil Company (INOC) conforming to the Iraqi National Commercial Law. The fourth law about the revenue sharing specifies that the revenues should go to the federal government and then distributed among Iraq's regional governments and oil-producing provinces equitably. Federal Ministry of Finance is used as a means to distribute the revenues. All previous contacts are being reviewed to see if they conform to the Hydrocarbon Law. There is a plan to establish a Federal Council on Oil and Gas headed by Iraq's Prime Minister with representatives from all provinces with over 100,000 bpd oil production and representatives of some federal agencies. The Iraqi official

added: "it is being said that the purpose of the U.S. occupation is oil, and it follows that these laws are written to safeguard the American interest. This is not true. Iraq is an independent country and can make its own laws." Another Iraqi participant took a stance against this assertion by claiming that "this may be true but Iraq is losing some control over its oil resources because of the practice of sub-contacting." In sum, there were two arguments: a) Iraq does not need any foreign investment in its oil and gas sector, because it has capital and the know-how. Therefore, no contract with foreigners should be allowed in the Hydrocarbon Law. And b) Iraq needs foreign investment to develop its energy sector. An Iraqi participant suggested the adoption of a middle-ground formula under which the Iraqi National Oil Company (INOC) should have more than 50% of the assets and capital investments in any oil contracts.

Several Iraqis warned that the problem of Kirkuk cannot be ignored. It was noted that there is a debate between the Iraqi Prime Minister and

the Regional Government of Kurdistan of Iraq (RGKI) to find a solution for Kirkuk and other oil-related problems. Most participants supported the Article 140 of the Iraqi constitution which mandates a referendum on whether the oil-rich Kirkuk province should become part of Iraqi Kurdistan. Saddam's "Arabization" policy led to the displacement of tens of thousands of the non-Arab native population who were expelled from their homes in Kirkuk and other areas to make room for loyal Arabs. This policy had caused conflict among the Arab and the non-Arabs inhabitants of this region.

### **The Status of the Foreign Forces in Iraq**

Another major topic in this workshop was the need for reaching an agreement on the status of the foreign forces in Iraq. A number of questions were raised here: What is the best exit strategy, a quick withdrawal, or a step-by-step withdrawal corresponding to the expansion of Iraqi national military institutions? Could the Iraqi national army be the sole party responsible for the Iraqi security? What are the dangers of the immediate withdrawal of all foreign forces?

The Iraqi argued that they should look for a timetable for the withdrawal of foreign troops in such a way which will not lead to more instability. There were different views expressed about the function of the multinational forces (MNF). Some believe that the MNF are more engaged in protecting themselves than the Iraqi population. Another view was that the foreign forces are involved in intelligence gathering operations against the terrorist groups in the region. Some Iraqis

consider the MNF as the liberators and the guardians of the Iraqi people, while others view the MNF as the invaders and the occupiers who have caused Iraqi instability. Whatever the case may be, most participants agreed that the MNF should be withdrawn from Iraq, and Iraqi national army should assume the responsibility of maintaining law and order in the country. An Iraqi politician said that Iraqis want the foreign forces to go back safely to their own countries. Although the Iraqi people express gratitude to these forces but they are determined to protect themselves without any dependence on the foreigners.

An Iranian participant argued that the Bush Administration is under pressure to withdraw its forces from Iraq and is looking for an exit strategy from the unpopular military occupation. The arrest of five Iranian diplomats in Erbil by the American forces is the evidence of the misguided policy of the U.S. This action was a violation of the sovereignty of the Iraqi government and the KRGI. Another criticism related to the notion of the 'Responsibility to Protect' because the U.S. is failing to meet its obligation to protect the Iraqi population. On the one hand, if the Americans follow their present policy, they have to confront a Vietnam-like situation in Iraq. If, on the other hand, the U.S. withdraws its forces rapidly, the probability of more Iraqi instability with repercussions for the entire region will be high. These forces will be needed to curb the sectarian violence and prevent a widespread and indiscriminate massacre of Iraqi civilians. An Iraqi official argued that there is a need for two timetables: a) One for the withdrawal of the foreign forces

and b) a corresponding timetable for training and equipping a national army for Iraq to replace the foreign troops.

### **The Role of the Neighboring Countries**

The Iraqi participants called on the neighboring countries to help Iraq in the stabilization process. The role of the Arab intellectuals and Arab media is important, because the Arab intellectuals through Arab media could discuss the danger of terrorism. The masses should understand the distinction between the resistance against the occupation and the terrorism and criminality.

An Iraqi parliamentarian said that Turkey's cross-border incursions in northern Iraq to attack Kurdish Workers Party (PKK) bases on the pretext of combating these Kurdish separatist guerrillas are unacceptable to the Iraqis. He claimed that the Turkish government has been using the issue of the PKK as an excuse to intervene in Iraqi politics. The PKK is an internal problem, and cannot be solved militarily on Iraqi soil. He added that the uncertain status of Kirkuk is the second pretext of Turkish interventionist policy. Ankara fears that Kurdish control of Kirkuk would give the Iraqi Kurds the economic power to win independence in case of Iraq's disintegration. The creation of an autonomous Kurdistan is viewed as a serious security challenge for Turkey because of the aspirations of its own Kurdish minority. The Iraqi Shiite and Kurdish participants were critical of the 2006 conference in Istanbul in which the Turkish government had invited only Iraq's Sunni politicians and intellectuals along with participants from Sunni-dominated coun-



tries like Qatar, Egypt, Jordan, Pakistan, Algeria, and Morocco. Some neighboring states are afraid that a Shiite-dominated Iraq might influence their repressed Shiite or Kurdish population. Another point related to the Kurds is the fact that they enjoy the benefits of federalism, but Turkey does not want to see an empowerment of the Kurds in Iraq. A Kurdish participant ask: "Why does not Turkey talk about millions of Kurds living in Turkey or the large number of Arabs residing in Turkey? Should these minorities in Turkey join Iraq? Should Iraq intervene in Turkish internal affairs using the ploy of wanting to ensure the rights of these minority groups?" However, he was quick to draw attention to the flourishing and mutually beneficial economic and trade ties between Turkey and the Iraqi Kurds in spite of these conflicts of interest.

As to the other countries with common borders with Iraq, a few Iraqis expressed their hope that their government finds a way to encourage Iran and Syria to talk with the U.S because this will solve some Iraqi security problems. It was declared that the U.S. and Iran have common interest in Iraq. They both want to support the elected government of Iraq, and safeguard the independence and territorial integrity of Iraq. Both sides have assured the Iraqi government that they do not want Iraq to be their battleground. Another participant stated that Jordan was opposed to the invasion of Iraq for the purpose of the regime change. The Americans should have assassinated Saddam Hussein rather than invading and occupying the country. Civil society in Iraq and in the neighboring countries should establish closer ties.

### Concluding Remarks

In conclusion, it was noted that there are groups in Iraq who feel that they are marginalized and are not given an equal share in the decision making process. The important questions for the Iraqi government are: What can be done to ensure that the discontented groups have equal shares of economic resources and political power? How should the constitution be amended to facilitate national unity? An Iraqi participant noted that the constitution was voted by 80% of the people, but most of the Sunni Muslims who are now calling for the amendments of the constitution, did not vote for it. He agreed that there is a need for consensus-building in the process of constitutional amendments. Some one suggested that the Kurds and the Shiites should give up some of their privileges in order to facilitate the search for a viable solution. At any rate, the Iraqis should respect the principles of democracy and the rule of law. The minorities should accept the majority view. Another conclusion dealt with economic injustice and economic corruption. There is a need for a mechanism for equitable distribution of oil and other national resources such as water.

It was also recommended the government in Baghdad to monitor the involvement and the interference of the neighboring countries in the internal affairs of Iraq. Open borders of Iraq have allowed terrorist groups to enter Iraqi territory with ease. Furthermore, foreign governments can transfer weapons and funds to the Al-Qaeda terrorists and other militia groups in Iraq across the porous borders. The workshop participants concluded that the neighboring countries can greatly

contribute to the stability of Iraq, and emphasized that politicians and scholars from Kuwait, Saudi Arabia, Syria and the other major regional states should be invited to the future Pugwash workshops on Iraq.

Special thanks should be given to Professor Hussain Al-Shahrestani, Iraq's Minister of Oil and Mr. Mohammad Ihsan, Minister of Extra Regional Affairs, KRG, and the Iraqi Pugwash Group for their assistance in organizing and hosting the workshop in Erbil.

### Notes

- \* This report is based on the major issues discussed in the sessions, and is the sole responsibility of the rapporteur.
- <sup>1</sup> The Baath Party came to power in 1963 in Iraq, and was the ruling political party under Saddam Hussein's regime.
- <sup>2</sup> Several Iraqi participants condemned the Al-Qaeda terror organization for its role in the sectarian attacks against the Shiite pilgrims and the bombings of the Shiite holy sites in Iraq. They noted the 2003 Karbala suicide bombings, the 2004 Ashura massacre in Karbala, and the 2006 bombing of the Al-Askari Shrine in Samarra which had resulted in the loss of life and material damages to some of the most important Shiite mosques.

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## Participants

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## An Active Canadian Pugwash Group Joins and Shapes the 50th Anniversary Events

### Report by

*Adele Buckley, Canadian Pugwash*

In anticipation that they would be part of a historic event, thirty Canadian Pugwash members from across Canada traveled to the village of Pugwash for July 5–9, 2007. The expert discussions of the Extraordinary Workshop “Revitalizing Nuclear Disarmament” included the contributions of Ernie Regehr, Erika Simpson, and Adele Buckley; and a number of CPG observers were enabled with ideas for their own sphere of work in nuclear disarmament. We took pride in the fact that the Hon. Douglas Roche, co-Chair of the slate of anniversary events, is a past Chair of Canadian Pugwash. Presently the Chair of the Middle Powers Initiative, he continues a distinguished career in fighting for nuclear disarmament. Media arrangements for the 50th anniversary projects of Canadian Pugwash, and also for the complete suite of events commemorating the 50th Anniversary of Pugwash Conferences were handled by the Rideau Institute, based in Ottawa, with very satisfactory results.

Recording of a conversation between M.S. Swaminathan and Roméo Dallaire was a special project for us, in which we wanted to experience the views of both East and West. Conversation guide was Erika Simpson. Prof. M.S. Swaminathan, President of Pugwash is a renowned genetics scholar who has been accorded many honours. Lieut. General Senator Roméo Dallaire, the Honorary Patron of the Pugwash Peace Exchange, has had a distinguished military career and has presented a motion in the Senate of Canada urging complete nuclear disarmament. A transcript of this conversation is available. Several publications were prepared specifically for the 50th anniversary, and were distributed in Pugwash. These were (1) summer edition of Peace Magazine, featuring Pugwash interviews and authors (2) brochure commemorating eminent member Anatol Rapoport and (3) pamphlet “Canadian Pugwash calls on NATO to Denuclearize”.

Interactions with the international scientists and poli-



*Roméo Dallaire, Adele Buckley, and M.S. Swaminathan*

cymakers, as well as with the local community and members of the Pugwash Peace Exchange were frequent and stimulating. We appreciated a special dinner at Fox Harbour on July 6, including after dinner comments by CPG member Giovanni Brenciaglia, nephew of Cyrus Eaton, and head of the Pugwash Park Commission. CPG members attended the ceremony of the presentation of the Nobel medal to the Pugwash Peace Exchange and went on to the Dinner of Peace—a highlight event. In the after dinner program, the crowd was delighted with a short piano concert of Bach and Chopin by international performer Pierre Jasmin, CPG member and also President of Les Artistes pour la Paix.

Our Annual General Meeting was scheduled three months earlier than usual, to coincide with the 50th anniversary. Held at the Cyrus Eaton Dining Hall, the



**Walter Dorn.**

business meeting included election results, financial reports, and reports from Chair, Adele Buckley, and incoming Chair, Walter Dorn. In addition to hearing from Douglas Roche on the Extraordinary Workshop, others reported on progress on CPG sponsored projects—campaign for recognition of the name of Canadian Pugwash (in Canada); anniversary campaign “Canadian Pugwash Calls on NATO to Denuclearize”; Global Issues Project and the planned (Sept 21,22, 2007) roundtable on Climate Change and Energy. During the early spring of the year, a nomination and election process had been carried out that included the entire Canadian membership. The AGM affirmed the following new slate for the Board of Directors, and Executive Committee—Walter Dorn, Chair; Erika Simpson, Vice-Chair; Adele Buckley, Treasurer; Sergei Plekhanov, Secretary; David Harries, Member; Steven Staples, Member; Michael Wallace, Member.

An evening reception and dinner was held in recognition of the contributions of Adele Buckley, Lee Lorch, Stephanie Reford and Murray Thomson.

The Public Forum, *Communicating the Urgency of Nuclear Disarmament*, was organized by Canadian Pugwash and co-sponsored by five additional Canadian



**Erika Simpson and M.S. Swaminathan.**

peace groups. The speakers: Dr. Jeffrey Boutwell, *News from the Extraordinary Workshop*; Dr. Janet Eaton, Co-Chair, Canadian Voice of Women for Peace, *Connecting to the Power of Women*; Murray Thomson, O.C., Canadian Pugwash Member, *News from the Campaign to Change NATO Nuclear Weapons Policies*; Sandra Ionno Butcher, Director, Pugwash History Project, *Standing on the Shoulders of Giants*. Keynote speaker was Prof. M.S. Swaminathan, President, Pugwash Conferences. [See [www.pugwash.org](http://www.pugwash.org)]. Those who heard his wide ranging

presentation on the forum theme were inspired and motivated. His long journey from India especially to be at our Canadian forum was much appreciated. Breakout groups worked on the draft of the planned output of the forum—the *Call to Canadians*. We want all citizens to become informed about the present peril of nuclear weapons and urge action from every level of society and government in Canada. An excerpt from the distributed text follows. The full text is at [www.pugwashgroup.ca](http://www.pugwashgroup.ca).

## **Call to Canadians** *Understanding the Urgency of Nuclear Disarmament*

As long as nuclear weapons exist they will one day be used. Nuclear arsenals remain enormous, nuclear capabilities are spreading, and the likelihood of the use of nuclear weapons is growing. Canada, a nation that has a reputation for promotion of international cooperation, should exercise its moral authority, connect with like-minded states and insist on real progress toward an ultimate goal of nuclear disarmament. Nuclear weapons are targeted at cities, in gross violation of the human rights of their citizens. In spite of the real and serious threat of a nuclear attack, accidental or deliberate, Canadian political parties attach low importance to nuclear policy development. Widespread determination to end this threat must develop in governments at all levels, academic institutions, corporations, non-government organizations (NGOs) and the general public. Public opinion ultimately shapes political action in democratic countries. It is imperative for many Canadians to become informed about the *present* peril of nuclear weapons

This year commemorates the 50th Anniversary of the founding of the Pugwash Conferences, which subsequently became a worldwide peace movement. The **Canadian Pugwash Group**, at a meeting with 5 Canadian peace groups in Pugwash Nova Scotia on July 8, 2007, adopted this **Call to all Canadians**.

Engage the mass media. Launch a sustained movement for public understanding of the grave perils of nuclear weapons—immoral, and declared illegal by the International Court of Justice. When the public becomes aware that they are the targets, then they will insist on action from their decision makers.

“Remember your humanity and forget the rest” quoting from the Russell–Einstein Manifesto, the founding document of the Pugwash movement.

Engage youth in the process, as participants and decision makers. Introduce in school curricula, information relating to the consequences of the use of nuclear weapons in Hiroshima and Nagasaki in August 1945, so as to bring home the immediate and long term disastrous impact of a nuclear war.

Start a nuclear peril literacy movement, so that the climate for ending nuclear proliferation and eliminating nuclear weapons can be generated.

Recognize the interconnectedness of global threats. Because of the multi-dimensional threats posed to human security by climate change, and the instability in global affairs that will result, it is vital to remove the threat of nuclear weapons *now* and avoid the risk that some nation will instigate a nuclear exchange.

Encourage and support Canadian Mayors in joining Mayors for Peace, led by Mayor Akiba of Hiroshima.

Appeal for action *now*, **from every level of society and government in Canada**; insist on clearly demonstrated progress on these urgent matters

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*The “Call” continues with recommendations to the Canadian government.*  
.....

**International Student Young Pugwash  
& M S Swaminathan Research Foundation  
Consultation on  
*Food Security: A Great Threat to Human Security***

**Chennai Declaration on Making Hunger History**

The World Food Summit (WFS) held in Rome in 1996 had resolved to reduce the number of hungry people in the world from its 1990 level to half of it by 2015. Four years later, the Un General Assembly adopted the Millennium Development Goals (MDG). The first MDG is that the proportion of people living in poverty as well as the proportion of hungry people in 2015 should be half of what they were in 1990. Taking stock in early 2007, we find that while even the weaker MDG 1 goal is unlikely to be met if current trends continue, fulfilling the WFS pledge seems a far more difficult proposition. **Compared with 1990-92, the number of undernourished people in the developing countries in 2001-03 has declined very marginally from 823 million to 820 million, a meager 3 million decline which is not statistically significant.** The current hot spots of hunger and under-nutrition are in South Asia and Sub-Saharan Africa. Despite some reduction in the number of hungry people between the late 1970s and the early 1990s, South Asia still faces high levels of hunger. India, despite its high GDP growth rate for almost two decades now, has shown little decline in the incidence of hunger. The bad news is that the number of hungry people, after declining between 1990-92 and 1995-97, has been rising in much of the developing world between 1995-97 and 2001-03.

Not all news is bad, however. China has been a major success story, having reduced the number of hungry persons by a huge 43.6 million between 1990-92 and 2001-03, even while its population increased by over 127 million. Vietnam reduced the prevalence of undernourishment from 31% to 17% and the number of hungry people from 21 million to 14 million. Both China and Vietnam have focused not merely on growth of GDP, but also on agricultural and rural development. Outside Asia, Peru and Brazil have done well. A key factor in Peru was that value added per worker in agriculture increased by 4% per year between 1990-92 and 2001-03. Policies pursued in all these countries with respect

to meeting the challenge of hunger merit greater attention, so that lessons may be drawn in order to achieve success elsewhere in the developing world

A state of affairs, in this day and age, where nearly a billion people remain undernourished, is simply unacceptable. As the Director-General of FAO has remarked, **“The world is richer today than it was ten years ago. There is more food available and still more could be produced without excessive upward pressure on prices. The knowledge and resources to reduce hunger are there. What is lacking is sufficient political will to mobilize those resources to the benefit of the hungry.”** The political will has to be generated by creating widespread awareness of food as a basic human right. The media, the judiciary and civil society all have a key role to play in this process, as do elected governments at the central, state and local levels. **Hunger in the twenty-first century is, quite simply, a reflection of the decline in the spirit, “Remember your Humanity” in the worlds of Bertrand Russel and Albert Einstein the Founders of the Pugwash Movement.** The challenge internationally is to make effective the right to food and eliminate hunger across the globe. The challenge for India is to find a development path that does not merely deliver high GDP growth rates, but transforms India from a republic of hunger to a republic of happiness.

Not all sections of the population have the same nutritional needs. Both a socio-economic basis and a life-cycle basis are relevant for setting nutritional priorities. A life-cycle approach to nutrition that focuses on pregnant and lactating mothers, children in the age group of 0-6 years, with particular attention to infant and young child feeding practices and adolescent girls is called for. Denying a new born child an opportunity for the full expression of his/her innate genetic potential for physical and mental development is the cruellest form of inequity. In terms of socio-economic priorities, we need to focus on the assetless and the petty producers, including small and marginal farmers and rural artisans. Further, while rural food insecurity is

much the larger part of the problem, with increasing urbanization and migration to urban centers in search of employment, urban food insecurity will also need to be addressed.

Strategies to meet the challenge of hunger need to take on board the lessons of the last two decades. The lesson from China and Viet Nam highlight the importance of agricultural growth led by small farmers. As the **World Food Insecurity Report of 2006** reminds us, the bulk of China's agricultural output comes from about 200 million very small (0.65 ha or less) farms. Increasing the productivity of small farms is one of the key steps to elimination of rural hunger. Equally important, is the creation of non-farm livelihood opportunities. Slow growth of employment even while the overall GDP growth rate is high is one important reason for the sustained prevalence of undernourishment on a large scale. Third, it needs to be recognized that nutritional outcomes are also critically dependent on non-nutritional factors such as investments in rural infrastructure including a variety of post-harvest facilities, empowerment of marginalized groups including women, and a variety of measures relating to education, public health, sanitation and environmental hygiene. As already mentioned, nutritional interventions must also be life-cycle based.

Global policies are critical to the success of national policies to address hunger, given the increasing levels of integration in the global economy and the increasing vulnerability of developing economies to global developments, arising at least in part from the manner in which international financial institutions pressurize them to adopt neoliberal policies. Here, the WTO Doha round, billed originally as a development round, but sadly belying the name so far, becomes important. These negotiations must not only lead to the elimination of unfair trade practices of the advanced countries by way of huge subsidies and arbitrary sanitary and phyto-sanitary conditionalities constituting non-tariff barriers to agricultural exports of the developing countries. They must also recognize the importance of agriculture as a livelihood for the vast majority of the population, fundamentally different from the largely commercial motivation of agriculture in the developed world. Of particular concern in terms of livelihoods and employment is the danger that transnational supermarkets pose both to farmers and to millions of petty producers and traders in the developing world. There is also a need for global as well as national recognition of the implications of HIV-AIDS pandemic, its links with tuberculosis and the enormous implications for food security in any effective strategy to address the hunger challenge. At

the same time, steps to control HIV/AIDS should involve a food cum drug approach, since nutrition support is essential for getting the benefit of drugs.

At the international, national and sub-national levels not only the formulation of proper policies are of the essence, but also the expedient and efficient execution of existing provisions, policies and programmes. Socio-economic and political analysis should focus on the political and governance limitations that hinder the implementation of those programmes in practice. To remedy such shortcomings, policies and their implementation should be conceptualized, locally grounded, people centered and empowering.

The attack on hunger clearly has to be a global commitment and enterprise. The first step in this enterprise has to be an unambiguous delineation of the objective. **This Consultation recommends that the goal should be abolition of hunger by 2015, and not halving the proportion or the number of the hungry in relation to any chosen base year.** As has been stated already, hunger in the present age of enormous technological and economic advance and achievement is inexcusable. The world and its constituent countries need to move as quickly as possible to legislate the right to food into their constitutions. A global coalition for a hunger-free world needs to be built up urgently to achieve the minimum goal of abolition of hunger by 2015.

We recommend the following five steps to achieve the goal of a hunger-free world by 2015.

All Member States of the UN should make the right to a balanced diet, clean drinking water, environmental sanitation, primary health care and primary education a basic human right. UN should set up a Statutory Body to provide political oversight to the global and national efforts to achieve the goal of a Hunger-free world by 2015. Such a Body should comprise representations of G8 and G20 nations, drawn particularly from food surplus and food needy nations.

The annual global requirement of foodgrains to ensure that 820 million children, women and men do not go to bed hungry will be about 200 million metric tonnes or about 10% of the current global foodgrain production. The untapped production reservoir, even with the technologies currently on the shelf, is high in most cropping systems in most developing countries. Therefore by enabling developing countries to improve small farm productivity, on the one hand, and by encouraging industrialised countries to launch a special, "Making Hunger History Production Drive" on the other, it should not be

beyond our technological and economic capability to produce the needed quantities of foodgrains. The challenge will be to get the needed food to the right person at the right time and place.

The World Food Programme currently allots 90% of food grains available to it for emergency relief, with the rest going to Food for Development programmes. A third window should be opened in WFP for achieving the goal of freedom from Hunger through an **Universal Food Guarantee Programme**, which combines the features of Food for Work and Food for Human Development programmes, with priority attention to pregnant and nursing mothers, infants and children and old and infirm persons. All nations should contribute together 200 million tonnes of food grains annually for implementing to Food Guarantee Programme. Jointly with WFP, the proposed UN Body for a Hunger-free world can coordinate the efforts in this area.

The Doha Round of WTO negotiations should make the following two commitments for ensuring the successful accomplishment of a hunger-free world by 2015

All technologies which can contribute to enhancing human nutrition and health security should be open for the compulsory licensing of rights, so that there is social inclusion in access to life saving technologies protected by intellectual property rights.

Nations where over 50 percent of the population depend upon crop and animal husbandry, fisheries, forestry and agro-processing as the primary source of work and income security in rural areas should have the right to impose quantities restrictions on the import of commodities which can result in destroying local livelihoods/jobs. Safeguarding and strengthening local liveli-

hoods should be the bottom line of all trade policies. This is essential since the famine of work or sustainable livelihood opportunities is now the predominant cause of chronic hunger.

If such steps are taken trade can become a strong ally in the movement for a world without hunger.

Predominantly rural and agricultural countries should promote decentralised community managed food and water security systems, which involve the organisation by the community field gene banks to conserve local grains, seed banks, food banks and water banks. This will help to enlarge the food basket by including a wide range of nutritious but underutilised crops in the domestic diets. Today, global food security systems depend upon less than ten major crops. This is potentially dangerous, particularly in the context of impending adverse changes in temperature, precipitation and sea level as a result of climate change. Conserving agro-biodiversity and linking conservation, cultivation, consumption and commerce in the form of local level food and nutrition security systems will help to strengthen both food and livelihood security.

10. Where hunger rules, peace cannot prevail. The knowledge era opened up by modern information communication technology (ICT), space technologies and other areas of science relevant to sustainable advances in agriculture, provide uncommon opportunities for achieving the goal of food for all and for ever. The UN Millennium Development Goals represent a global common minimum programme for sustainable human security. There will be lasting peace and security for all, if the basic minimum needs of every human being can be met. There is no technological, economic, social or political excuse for not doing so.

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**PROFESSOR DAME ANNE McLAREN**  
(1927–2001)

Anne McLaren was a British scientist who made fundamental discoveries in embryology and genetics, pioneering techniques of reproductive biology that led to the development of in vitro fertilization (IVF) in humans and the birth of the test-tube baby. Her incisive mind and clear articulation made her a fine communicator of scientific ideas and an important contributor to the ethical and political debate on human embryo research.

She was born in 1927 to Henry McLaren, 2<sup>nd</sup> Baron Aberconway and Christabel McNaughton, into a family of industrial magnates known for their lifelong committed socialist views and support of women's suffrage. She was awarded a scholarship to study zoology at Lady Margaret Hall, Oxford, where her love of science began and where she obtained her doctorate in 1952. She married a fellow student, Donald Michie in the same year, and moved with him to University College London (UCL) and then to the Royal Veterinary College London (1955-59) where they both studied the issues exploring nature versus nurture, conducting a specific study on the effect of the maternal environment on the number of lumbar vertebrae in mice. In 1959 she moved to the Animal Genetics Unit at Edinburgh where she became interested in chimaeras and germ cells, writing two highly influential books: *Mammalian Chimaeras* (1976) and *Germ Cells and Soma* (1980).

In 1974 she moved back to UCL to lead the Medical Research Council's Mammalian Unit where she directed research into mouse embryology, reproduction and genetics, and in 1984 she published a paper in 'Nature', co-authored with Liz Simpson, in which she disproved the prevailing theory on the nature of the male-determining gene on the Y chromosome, encouraging the search again for the real gene. In 1992 she moved to Cambridge as Principal Research Associate in what is now the Wellcome

Trust/Cancer Research UK's Gurdon Institute, a position she held until her death. Only a year ago she published a major research paper: *Influence of Sex Chromosome Constitution on the Genomic Imprinting of Germ Cells*, which appeared in the National Academy of Sciences of the USA in July 2006. During her career she wrote more than 300 papers.

Many of the areas in which she worked were



associated with ethical issues and she was a member of the Warnock Committee, which played a major role in the passage of the 1987 Family Law Reform Act and the 1990 Human Fertilisation and Embryology Act. Politically she was a liberal, and during the early stages of the Cold War kept in touch with scientists behind the Iron Curtain. For a while she was penalised for this, being denied entry to the United States. She was a distinguished member of British Pugwash,

serving on its Executive Committee, on which she was a lively contributor of ideas. Latterly she served as a member of the International Pugwash Council (2002-2007). At the time of her death she was a member of the European group on ethics that advises the European Commission on the social and ethical implications of new technologies.

During her career she received many honours. In 1975 she was elected a Fellow of the Royal Society, and became the first woman to hold an office in that institution, being elected to the post of Foreign Secretary from 1991 to 1996. In 1990 she was awarded the Royal Society Medal. She was made a Fellow of the Royal Society of Obstetricians and Gynaecologists for her pioneering work on fertility (1986) and was created a Dame of the British Empire in 1993 (although, being a very modest person, she never liked using that title, preferring to be called 'Dr.') and was also elected President of the British Association

for the Advancement of Science. In 2002 she won the Japan Prize with Andrzej Tarkowski for contributions to developmental biology.

She was an outstanding teacher and mentor to young scientists, described by admiring students as: “our role model: scientist, mentor, friend, mother and now grandmother!” A tribute from one of her research students described working with her: “Work sessions with Anne took about 15 minutes. With terse surgical precision she cut through unnecessary detail, pruned away shabby

thinking, exposed the crux of the matter, and left one poised to ask the next question. She never wasted my time nor gave me the impression that I wasted hers.”

Anne McLaren, tragically died with her former husband and lifetime friend and academic collaborator, Donald Michie, in a car accident on 7 July 2007, leaving a son, two daughters, and a stepson.

*Robert Hinde*  
*UK Pugwash*

### **CARL FRIEDRICH VON WEIZSÄCKER (1912–2007)**

Carl Friedrich von Weizsäcker was born on June 28, 1912 in Kiel, the son of the German Diplomat Ernst von Weizsäcker. He was the elder brother of the former German President Richard von Weizsäcker. He studied Physics, Astronomy and Mathematics in Berlin, Göttingen and Leipzig (1929-1933), supervised by Werner Heisenberg, Niels Bohr and Friedrich Hund. His early research was on the binding energy of the atomic nuclei (semi-empirical Bethe-Weizsäcker formula, 1935) and the nuclear fusion processes in stars (Bethe-Weizsäcker-Process, 1937). Later on, he intensified his work on the conceptual definition of quantum physics, particularly on the Copenhagen interpretation.

During World War II he recognized the political as well as the technical implications of nuclear weapons and joined the German “Uran-Verein” which was founded to explore the military as well as the civilian use of nuclear fission. He predicted the use of plutonium and worked on a theory to use it for energy production. Historians are divided over the real motivation of the group under Heisenberg and others from 1939 to 1942 to construct a nuclear weapon. Weizsäcker revealed later on that it was “only divine grace” which impeded him to build a German atomic bomb. After World War II the ten German physicists were detained at Farm Hall (UK) in 1945 and the recordings of their conversations were published in 1993.

After his return to Germany, Weizsäcker became director of the department for theoretical physics in the

Max Planck Institut in Göttingen. From 1957 to 1969 he was Professor for Philosophy at the University of Hamburg, where he held publicly well-attended lectures on natural philosophy, ethics and the social responsibility of scientists. In 1957 he initiated the “Göttingen Declaration” in which eighteen German leading nuclear physicists not only called for the definitive abdication of all kinds of nuclear weapons for Germany, but also renounced explicitly to work on the “production, the testing and use of nuclear weapons”. The declaration caused a public debate and made it nearly impossible that Germany could work on its own military nuclear program. The scientists also underlined that a small country such as Germany cannot be defended by nuclear weapons.

Weizsäcker attended the second Pugwash Conference in Lac Beauport in 1958 and learned about the international efforts for arms control, which he could later introduce in the political debate in Germany. He had close contacts with Joseph Rotblat, Leo Szilard, Victor Weiskopf and others. With the foundation of the “Vereinigung Deutscher Wissenschaftler” VDW (Federation of German Scientists) in 1959, the German Pugwash Group was also established by Weizsäcker and colleagues. In Hamburg the VDW Research Center published important studies on “Civil defense” (1962) and “Effects of a Nuclear War and War Prevention” (1970/71). In 1970 he formulated the concept of “Weltinnenpolitik” (Global Governance). From 1970-1980 he became director of the “Max Planck

Institute for the Research of the Living Conditions in the scientific-technical world” in Starnberg near Munich, where scientists worked on many modern societal basic problems such as peace research, arms control, economy and resources, environmental affairs, foreign aid etc. Especially the work of the “strategy and arms control group” directed by Horst Afheldt on European Security, non-offensive defense and the dangers of a nuclear war in Europe were introduced and discussed in the Pugwash community widely. In the 1980s, this was not only an important contribution to the debate how to achieve stability in Europe, but elements of it were also included in the Treaty on Conventional Forces in Europe. Weizsäcker attended several Pugwash meetings and was

not only demanding regarding the work of scientists for peace and disarmament, but he was one of the leading figures who founded peace and conflict research in Germany.

We express our condolences for the passing of Carl Friedrich von Weizsäcker, and pay tribute to his life, dedicated to serving the people, science and security of the world.

*On behalf of the German Pugwash Group  
Götz Neuneck,  
Chairman of the German Pugwash Group and  
member of the Pugwash Council*

### **ACADEMICIAN NIKOLAY A. PLATÉ (1934–2007)**

Academician Nikolay A. Platé, a prominent Russian scientist, organizer of research and public figure, and Vice President of the Russian Academy of Sciences, died suddenly in Moscow on March 16, 2007 at the age of 72.

Nikolay Platé was born in Moscow on November 4, 1934 in the family of famous Russian scientists Professor Alfred Platé and Academician Nikolay Zelinsky. After graduating in 1956 from the Moscow Lomonosov State University he served at the same University as a assistant professor, professor and Director of Laboratory at the Chemistry Faculty. Since 1985 and until last day of his life he was Director of the A.V. Topchiev Institute for Petrochemical Synthesis of the Russian Academy of Sciences.

His field of professional activity was polymeric liquid crystals and mesophases, polymeric membrane's, polymers for biomedical applications, modification of polymers, theory of macromolecular reactions, chemical disarmament and petrochemistry. He was author over 500 publications, 125 patents and 8 books.

Academician Platé was one of the leaders of the Russian scientific community. In 1996 he was elected as a Secretary General for Science of the Russian Academy of Sciences (RAS), since 2001 he served as a RAS Vice President, and, concurrently since 2006 he was Academic Secretary of the Division of Chemistry and Materials Sciences of the RAS.

Nikolay Platé was an active member of the Pugwash Movement. He participated in 31<sup>st</sup> Pugwash Conference

(Canada, Banff, 1981), 38<sup>th</sup> Conference (USSR, Dagomys, 1988) and in meetings of the Pugwash Study Group on Chemical warfare in 1988—1991.

In the 1990s, jointly with Academician Vitalii Goldanskii, he made a great contribution to the development of the Russian Pugwash Committee amidst the new political and economical conditions in Russia. In 2005, Academician Platé headed the National Organizing Committee of the RAS for 50<sup>th</sup> anniversary of the Russell-Einstein Manifesto and gave a key speech on Academy's Session commemorated Manifesto jubilee. During last months Nikolay Plate paid his attention for preparation to the 50<sup>th</sup> anniversaries of the Pugwash Conferences and the Russian Pugwash Committee. Under his edition we are preparing publications on Pugwash history and activity.

Academician Platé made a great contribution to chemical disarmament as a member of the Russian State Commission on Chemical Disarmament, Scientific Council at the Security Council of Russian Federation, Governmental Commission on chemical and biological security, and Scientific Council of the Governmental Military and Industrial Commission.

The Russian Academy of Sciences and the Russian Pugwash Committee lost a great scientist, friend, teacher and colleague. We will remember him!

*Yury Ryzhov and Mikhail Lebedev  
Russian Pugwash*

## **JACK BOAG (1911–2007)**

Jack Boag, who died this January at the age of 95, was a radiation physicist whose career closely paralleled that of his good friend and sometime colleague, Joseph Rotblat.

Jack carried out pioneering research on the fast chemical reactions that follow exposure to ionising radiation, thus leading to damage to tumours and other tissues. In 1965 he was appointed Professor and Head of the Department of Physics at the leading British cancer centre—the Institute of Cancer Research and Royal Marsden Hospital, in London—where he subsequently undertook the thankless task, as Acting Director, of rescuing the Institute from a position of severe financial crisis.

Following retirement in 1976 he was recruited by Jo into Pugwash, becoming Secretary of the British Pugwash Group, taking an active part in a number of Pugwash

conferences and workshops, and latterly organizing several very successful national Pugwash events in Scotland. In 1987, with Jo Rotblat, he participated in the Moscow conference that President Michael Gorbachev convened in order to gain advice for himself on an approach to ending the Cold War. This seems to have been Gorbachev's first contact with Pugwash, but which he still actively maintains.

Complementary to his high scientific ability was a considerable facility with languages. He put this to use in translating and editing the letters and papers of the Russian physicist, Pyotr Kapitza, covering the period when he was working in Cambridge under Ernest Rutherford, and casting an interesting light on the days of close British-Russian collaboration in nuclear science.

*Kit Hill, March 2007.*

## **HANS TOLHOEK (1923–2007)**

Hans Tolhoek, one of the eldest Pugwash members in the Netherlands, passed away at his home in Groningen on March 6, 2007 at the age of 84. As a young and promising physicist he attended a conference held in London in 1955 on “Parliamentarians for World Peace”, shortly after the Russell-Einstein Manifesto was issued. Three years later, while working at CERN-Geneva, he took part in a meeting at that international centre for fundamental research where Joseph Rotblat called on scientists to form national Pugwash groups to address the urgent need to end the threat of mass destruction by nuclear weapons. In response to this appeal he attended a Pugwash meeting in Geneva in 1959 and started Pugwash Netherlands around 1960.

Next to his work in basic theoretical physics, Hans had a lifelong involvement in Pugwash issues and in pole-

mology, the study of peace and the prevention of war. He attended more than 20 Pugwash meetings, many with his wife Loes. At the 38<sup>th</sup> Pugwash Conference in Dagomys, USSR in 1988, he was one of the strong supporters of the “*Dagomys Declaration*” on poverty and environmental degradation. In his last years he expressed deep concern about the tragic developments in the Middle-East.

With Hans, we have lost a remarkable individual with a deep commitment and a wide curiosity in the scientific, artistic and public domains.

*Johan van Klinken,  
Pugwash Netherlands*

**NGUYEN VAN DAO**  
**(1937–2007)**

Nguyen Van Dao, born in 1937, was one of the Vietnam's leading experts in mechanics. He was the founder of the Mechanics Institute of Vietnam and first editor-in-chief of the Mechanics Journal. He was the first director of Hanoi National University from 1994-2001. In 2001, he became the Chairman of the Science and Training Council at Hanoi National University.

Prof. Van Dao was also Vice President of the Vietnam Peace Committee, a frequent participant in Pugwash Conferences, most recently at the 56<sup>th</sup> Pugwash Conference in Cairo in November 2006, and he was a leading member of the Vietnam Pugwash Group.

*Nguyen Van Huynh*  
*Vietnam Pugwash Group*

**VLADIMIR FEDOSOV**  
**(1951–2007)**

Vladimir Fedosov of the Russian Pugwash Group, and chair of the International Federation for Peace and Conciliation, died at the age of 55 on February 3, 2007 after a short illness. A graduate of the Voronezhskiy Polytechnical Institute, he became a member of the Supreme Soviet of the USSR and participated in many parliamentary delegations for disarmament and international security. Following the collapse of the USSR he became a deputy chairman and in 1995 took up the post of chairman of the

IFPC. Fedosov also presided over the commission of ethics and regulation at the Public Chamber of the Russian Federation. He was an active participant of Pugwash meetings in Russia and was member of the Organizing Committee of the Russian Academy of Sciences for the 50th anniversary of the Russell-Einstein Manifesto in 2005.

*Mikhail Lebedev*  
*Russian Pugwash Group*

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## Pugwash Council for the 2002–2007 Quinquennium

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**Amb. (ret.) Ochieng Adala**, of the Africa Peace Forum (APFO) in Nairobi, Kenya, is former Permanent Representative of Kenya to the United Nations in New York, former Deputy Secretary/Director for Political Affairs, Ministry of Foreign Affairs and International Cooperation, and former Ambassador of Kenya to the Arab Republic of Egypt, the Kingdom of Morocco, Algeria and Tunisia; APFO, P.O. Box 76621, Tel.: (+254-2) 574092/6, Fax: (+254-2) 561357, E-mail: kilenem@africaonline.co.ke

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## Pugwash Council *continued*

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## Pugwash Council *continued*

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**Prof. M.S. Swaminathan** is a renowned agriculture scientist. Considered the scientific leader of the Green Revolution, his approach in pioneering "ever-green revolution" is at the heart of what is now called sustainable agriculture. He is a past recipient of the World Food Prize, the Honda Award, the Ramon Magsaysay Award, the UNESCO Gandhi Prize, and the Indira Gandhi Prize for Peace, Disarmament and Development. He chaired the International Commission on Peace and Food, and is UNESCO Chair in Ecotechnology, and Chairman of the MS Swaminathan Research Foundation in Chennai, India; MS Swaminathan Research Foundation, 3rd Cross Street, Taramani Institutional Area, Chennai-600 113, India, Tel.: (+91-44) 254 2790 / 1698, Fax: (+91-44) 254 1319, E-mail : msswami@mssrf.res.in

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## Calendar of Future Pugwash Meetings

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- 5-7 July 2007  
Pugwash, Nova Scotia  
*Pugwash Meeting no. 326: Pugwash Conferences/Middle Powers Initiative: Revitalizing Nuclear Disarmament*
- 21-23 July 2007  
Colombo, Sri Lanka  
*Pugwash Meeting no. 327: Pugwash Workshop on Self-Governance in Jammu and Kashmir*
- 1-3 September 2007  
Beijing, China  
*Pugwash Meeting no. 328: PSNSS / Pugwash Workshop on Northeast Asian Security*
- 21-26 October 2007  
Bari, Italy  
*Pugwash Meeting no. 329: 57<sup>th</sup> (Quinquennial) Pugwash Conference: Prospects for Disarmament, Dialogue and Cooperation*
- 22-28 November 2007  
Colombo, Sri Lanka  
Lanka Pugwash Group  
*Pugwash meeting no. 330: Pugwash Regional Workshop: Learning from Ancient Hydraulic Civilizations to Combat Climate Change, hosted by Sri Lanka Pugwash Group*
- 8-9 December  
Geneva, Switzerland  
*Pugwash meeting no. 331: 27<sup>th</sup> Pugwash CBW Workshop*
- 30 May-1 June 2008  
Ajaccio, Corsica, France  
*4<sup>th</sup> Pugwash Workshop on Science, Ethics and Society: Ethical dimensions and societal implications of convergent technologies for the improvement of human health and performance*

## **Pugwash Conferences on Science and World Affairs**

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*Secretary-General* Professor Paolo Cotta-Ramusino  
*Executive Director* Dr. Jeffrey Boutwell

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Professor Fernando de Souza Barros	Professor Amitabh Mattoo
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Professor Paolo Cotta-Ramusino	Dr. Alexander Nikitin
Dr. Lynn Eden	Professor Hitoshi Ohnishi
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Professor Karen Hallberg	Senator Douglas Roche
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Mr. Chen Jifeng	Professor Ivo Slaus
Maj. Gen. Mohamed Kadry Said	Dr. Mark Byung-Moon Suh
Prof. Saideh Lotfian	Professor M.S. Swaminathan
Dr. Riad Malki	

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